

NORMANSFIELD THEATRE SCENERY: MATERIALS AND CONSTRUCTION REVEALED THROUGH CONSERVATION

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INTRODUCTION

The Normansfield Theatre collection is a rare survival from the nineteenth century. Information about the materials, method of construction, manufacture and evidence of use were uncovered during its conservation and these findings are discussed in this paper. This unique collection is a rich resource that adds to the body of knowledge about the work of nineteenth-century scenery painters. How Normansfield Theatre came into being and its wider context will be briefly introduced before discussing the scenery in more detail.

NORMANSFIELD AND ITS THEATRE

Normansfield Theatre is part of the hospital founded by Dr John Langdon Down in Teddington, Surrey.¹ Together with his wife, Mary, Langdon Down established Normansfield Hospital in 1868 as a private asylum for people with learning difficulties 'of good social position.'² As part of their work, the Langdon Downs were involved in a pioneering approach to the care of people with learning difficulties that included stimulating the educational development of the patients (Ward 2009: 53). Entertainment was used for both educational and recreational purposes with theatre and music playing a significant role in their daily lives (Ward 2009: 70). In 1879 in the grounds of the Normansfield Hospital, Dr Langdon Down and his wife built the Entertainment Hall in the hospital, also known as the Normansfield Theatre, which served as an entertainment centre and chapel. The Langdon Downs wrote plays and organized the costumes (Earl 2010: 20). Entertainment was provided by the patients and members of the medical staff, who were in part employed based on their ability to sing, act or play an instrument (Ward 1996: 11). Normansfield Theatre, its stage and its scenery offer a powerful testament to Dr Langdon Down's vision.

The theatre, a grade II listed building, was designed by the architect Rowland Plumbe. It contains an auditorium with a balcony at the back that would have seated up to 350 people (Earl 2010: 24). A small set of stairs with iron balustrades leads from the auditorium to the stage. It has a large painted and gilded proscenium opening. The stage leads to double doors at the back which is now used as a scenery store for the large rolled cloths. With a stage depth of 6.2 m and proscenium width of 5.5 m, it has been described as a miniature theatre (Earl 2010: 31). It has limited flying space (the space above the stage) which meant that the scenery could not simply be raised to change the scenes. Instead, the stage has a simple upper groove system fixed in the underside of the fly floors to hold the flats or wings (painted canvases attached to wooden strainers) and these were slid on and off the stage to change the scenes. Backdrops and borders (large canvases attached to wooden battens) hung from the upper part of the stage. These would be lifted into place using a pulley system and lowered by a 'tumbling' (unrolling) action. The theatre is thought to be one of only two examples that survive in the UK with fully working mechanisms and the system of scene changing with its grooves,³ features that were common to many theatres of the nineteenth century (Earl 2010: 31) (Figure 1).

THEATRE SCENERY

The survival of scenery dating from the nineteenth century is rare. This collection of over 100 items of painted canvas stock scenery (ca. 1870–1909) is unique in the UK and part of a small group that survives worldwide.⁴ It endured probably because it belonged to a private hospital rather than a public or commercial theatre and the Normansfield stock scenery was reused and modified rather than replaced. It has been described by the Theatres Trust as 'the finest collection of old stock scenery in the country.'⁵ A variety of scenes – including a



Figure 1 Scenery on stage after conservation including the false proscenium border and flats and the street scene backdrop and flats (© Textile Conservation Foundation).

village street, woodland, country cottage, house interiors and seascapes – has survived.⁶

THE CONSERVATION BRIEF

The Textile Conservation Centre (TCC) was involved with the care of the scenery since the 1970s. In 1997 the TCC staff, when based at Hampton Court Palace, was commissioned to undertake a survey of the whole collection, document its condition and temporarily pack the items for storage. This work was carried out with the advice of Peter Longman (former director of the Theatres Trust and TCC trustee), John Earl (expert in theatre scenery, also a former director of the Theatres Trust) and David Wilmore (consultant for the historic stage machinery). The scenery was in poor condition and heavily soiled as it had been left unprotected and stacked in the theatre for many years. The canvases were torn and strainers broken (Rowe 1999). In 2003, Normansfield Hospital and theatre were renovated and came into the care of the Langdon Down Centre Trust. The contractors who undertook the renovation were charged with ensuring that the scenery was preserved and safely stored.

The brief for the conservation project was to conserve one set of scenery for static display on the stage using the original

stage mechanisms and to store the remaining scenery in a custom-designed system to allow access by specialist researchers. In order to develop the conservation methodology and carry out the conservation and storage of the scenery, research and testing were performed, building on the findings of the 1997 survey. Representative examples from the collection were studied to help devise the conservation treatment.



Figure 2 Conservation on site; repair being carried out on a walk-through cloth showing the flexible nature of cloths (© Textile Conservation Centre Foundation).

The painted scenery, consisting in part of large flexible cloths, sits within the remit of both textile and paintings conservation. The development of the conservation methodology was carried out by textile conservators from the TCC (then based at the University of Southampton), in collaboration with a painting conservator, Ambrose Scott-Moncrieff and conservation scientists from the TCC. The conservation and storage of the scenery was carried out between 2003 and 2005⁷ (Figure 2).

THE STRUCTURE OF THE SCENERY

The scenery consists primarily of borders, backdrops and flats.⁸ The backdrops and borders were simply constructed from painted canvases nailed to wooden rollers or battens and they were designed to be rolled and unrolled when used on stage. The flats were made from wooden strainers with a painted canvas attached with nails and glue to the top face of the strainer; the canvas did not extend round the edges. The strainers were rectangular in shape and generally had two horizontal cross-bars to provide some rigidity although the flats flexed when they were moved. Some of the flats were hinged or had a cut wood profile board attached along the side of the strainer to create different effects on stage. Most of the scenery had been painted onto canvas although one set for an interior was covered with wallpaper used to create a wallpapered room. Other features included leaded windows created from intersecting ribbons and flats with functioning doors. There were also painted wooden stage props including balustrades and a plinth with flowers.

The number of canvases and painted faces on the flats varies. The simplest construction consists of a single layer of canvas attached to the strainer which is painted on one side. For example: woodland scenes⁹ (46, 48, 49, 51, 52, 55); the shaped panelled room (37, 38); the cottage with roses (3, 5, 6); the country house (9); the picket fence (17, 18); and the panelled room (19, 20, 21, 23, 25). Another group of flats also has a single canvas but these have been painted on both sides. For example: the street scene and rocky ravine (40, 41, 42, 43); woodland and the tree with pink blossom (45, 50); and woodland and the stencilled room (47). A third group has a separate painted canvas attached to both sides of the strainer. For example: a false proscenium and blue curtain (53, 54); country houses and the panelled room (10, 1, 12, 13, 14, 15, 16); the cottage with roses and the panelled room (4, 7); and the rococo room and the panelled room (26, 27, 28, 30, 31, 32, 33, 34, 35, 36).

EXAMINATION OF THE SCENERY

The textile

Close study of the scenery gave us an insight into the scenic painter's craft. All the canvases were undyed tabby-weave fabrics. Two of the pieces had what is thought to be canvas manufacturers' marks on the back, both stating that they were

made of flax. Stencilled on the reverse of the street scene backdrop (R2) is: '62 ½ HEAVY POWER LOOM FLAX' and the false proscenium flat (54) is marked 'PURE FLAX SHEETING'. The appearance and texture of the fibres were very similar for most of the canvases. It was confirmed that the fibres came from the baste fibre family and identified as either hemp or flax using a combination of visual identification techniques involving observations with the naked eye followed by transmitted light microscopy of longitudinal samples and cross-sections of both unstained and stained samples.¹⁰

The scenic painters

On several of the sets, where the canvas is only painted on one side, commercial scenery painters' stamps can be seen. These are either stencilled or hand painted onto the canvases and include the scenic painter's name and address. Building on research carried out by Earl – who used listings from the Post Office Directory to chart the companies' trading dates (Earl 2010: 53) in combination with object documentation – it is possible to suggest an order in which different scenes were made and identify scenic painters of some of the unlabelled pieces.

The scenic painter 'N. HINCHEY, SOUTH LONDON, PALACE LONDON ROAD, SE' signed his name and address in his own hand on the back of the 'Street Scene' backdrop. His name appears only on this piece. The flats are painted on both sides so cannot definitely be attributed to Hinchey but it is probable that his firm painted them as similar stylistic features have been used in the buildings. A depiction of a street scene backdrop appears in the earliest published drawing of the theatre when it was first opened, indicating this was possibly one of the theatre's earliest sets (Earl 2010: 2).

J.T. Bull is the name most commonly found on the scenery and it appears on its own as well as being associated with G. Bull and his son. 'J.T. & G. BULL, MANUFACTURERS, 54 GREAT QUEEN STREET, LINCOLN'S INN FIELDS' was stencilled on the back of one of the 'rococo room' sets (29). The set includes 10 pieces, although his stamp does not appear on the others, and styling suggests that this set was made by one firm. This is thought to be an early set as G. Bull is only listed in the Post Office Directory until 1884 – five years after the theatre opened.

By 1884, J.T. Bull is listed separately from G. Bull (Earl 2010: 53) and his name appears as 'J.T. BULL, SCENE PAINTER & C., 134 NEW KENT ROAD, LONDON S.E.'. He painted a number of backdrops including a beach scene (R9) and riverside village (R10), the false proscenium border (RB1) and flats including woodland scenes (49, 52) and a panelled room (21) as well as props including a boat (86) and mirror (66). J.T. Bull was still listed as trading in 1902 (Earl 2010: 53).

No scenic painters' marks were visible on the false proscenium flats (53, 54) as they had canvases attached to both sides of the strainer. A similar style of painting was employed on the false proscenium border and flats so it was conjectured that they were made by the same maker. During conservation of the flats, it was necessary to release a canvas on one side of the strainer to provide sufficient access to effectively support the damaged textile. On the underside of the canvas on each flat,



Figure 3 Inside of the false proscenium flat showing the maker's mark, the woodland scene painted on the underside of the canvas and the fireproofing stamp (© Textile Conservation Centre Foundation).

the scene painter's name, J.T. Bull, was revealed, confirming it was made by the same maker (Figure 3).

'RICHARD DOUGLASS, PAINTING ROOMS, NEXT GRAND THEATRE, LONDON N' also appears on several flats including woodland scenes (44, 46, 48, 51). His work is thought to date from after 1888 as the Grand Theatre took its name at that time (Earl 2010: 53). He is known to have painted scenery for a number of different theatres in and outside London and as far north as Stockport.¹¹ He was also a recognized artist who painted woodland scenes reminiscent of the imagery found on the scenery.¹²

J.T. BULL & SON, SCENE PAINTER & [Co?], 134 New Kent Road, London S.E.' also appears on woodland scene flats (48, 49) and a walk-through cloth (R12). The inclusion of 'Son' suggests this was a later incarnation of the company.

Evidence of use

It is not uncommon for stage scenery to be reused (Earl 2010: 32) and evidence of modification or adaption was found on a number of flats in the Normansfield collection. Painting was added to the reverse of some of the canvases and in some cases this is thought to have been done at the theatre as it is naïve in style (49, 84). However, others were modified by professional scene painters. Douglass repainted some canvases that can

be attributed to J.T. Bull & Son. A white painted square and Douglass's name has been added on four flats (46, 48, 49, 51). On one of these, the name J.T. Bull & Son is visible through the paint (48). This indicates that Douglass was either working after or was a contemporary of J.T. Bull & Son. What is not clear at this stage is whether Douglass simply retouched the original canvases or repainted them.

Other evidence of reuse of the painted canvases came to light during the conservation of the false proscenium flats. When a canvas was released from the strainer during conservation (as mentioned above), it revealed that they were painted on the underside with scenes from older sets; one included a woodland scene (Figure 3).

The paint

The scenery had common characteristics: it was unvarnished and the paint had a matt appearance and was water soluble. Water-based paints were traditionally used because they dried quickly and did not create a glossy surface, which was important because of the strong stage lighting (Rosenfeld 1981: 84). The paint was thought to have been distemper with a glue-based binding material, probably animal glue (Figure 4), a commonly used size (Lloyds 1875: 18). Analyses to determine the binding medium were carried out.¹³ The results



Figure 4 Detail of the street scene backdrop showing the matt water-based paints (© Textile Conservation Centre Foundation).

were inconclusive; only one sample gave a positive result. The samples required more sensitive analysis but this was beyond the remit of the project so at present the binding medium has not been confirmed.

Analysis was carried out on paint samples from four different objects that were the focus of the interventive treatments. This was carried out primarily with a view to identifying if any materials contained toxic substances such as heavy metal, a traditional component of historic pigments, which may have posed a risk to conservators and the public. Using energy dispersive X-ray spectroscopy (EDS) at Southampton University, Dr Paul Garside¹⁴ analysed the samples. Heavy metals were found from a sample of the red paint from the false proscenium border confirming that lead, probably red lead oxide, was a constituent of the paint.¹⁵

The painted surfaces of different canvases were also documented. The false proscenium border, made by J.T. Bull, had a

thin application of paint that appeared to be applied directly onto the canvas. No obvious ground layer was apparent and the weave of the canvas was clearly visible when examined by eye (Figure 5). It has the appearance of a stain rather than paint. The paint was matt and very powdery in many areas, which was thought to be due to it having a low ratio of binder to pigment, giving the cloth the appearance of velvet. The thin application of underbound paint and no substantial ground layer ensured flexibility of the textile, which was important for a rolled cloth.

The paint on the street scene backdrop, probably made by Hinchey, had been applied more thickly than on the false proscenium border and covers most of the interstices of the weave. It appears that a thin ground layer or underlayer of preparatory paint had been applied which was visible on the underside of paint flakes and had soaked through to the reverse of the canvas (Figure 6). Although the backdrop was



Figure 5 Close-up of the fine layer of paint used on the false proscenium border; no ground layer is visible (© Textile Conservation Centre Foundation).

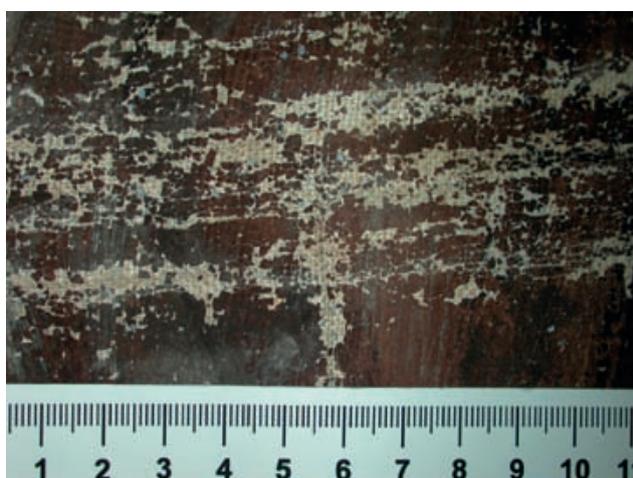


Figure 6 Close-up of the paint used on the street scene backdrop; the blue preparatory layer is visible on the underside of some paint flakes (© Textile Conservation Centre Foundation).

stiffer than the false proscenium border, it was still flexible. Flexibility was also an important feature of its function as it needed to be able to be rolled and unrolled with the ‘tumble’ action of the roller when the backdrop was used in the theatre.

On the street scene flats (40, 41, 42, 43), possibly made by Hinchey, a thicker ground layer completely covering the canvas was clearly visible that created a less flexible surface. A similar effect was observed on the false proscenium flats. J.T. Bull had once again created the appearance of velvet with the red paints but on the flats he had used a ground layer and the interstices of the weave of the canvas were not visible. The canvases on the flats did not require the same flexibility as the rolled cloths so a thicker paint layer would not have hindered their use. It appears that makers used different preparatory methods for the canvases of the rolled cloths and flats in accordance with their different functions.

The paint used on the scenery generally had a matt appearance and seemed to have a relatively low ratio of binding medium to pigment. It was reasonably stable but some crumbling of the paint surfaces had occurred due to flexing of the canvases or abrasion. However, some of the paint on the street scene flats, which was not quite so matt in

Table 1 Sample of blue paint from the street scene backdrop (R2) made by Hinchey.

| Element | Weight % | | |
|---------|----------|----------|----------|
| | Sample 1 | Sample 2 | Sample 3 |
| Al | – | 1 | 1 |
| Si | – | 2 | 1 |
| S | 5 | 7 | 4 |
| Ca | 95 | 90 | 93 |

Table 2 Sample of paint from the woodland scene flat (46) made by Douglass.

| Element | Weight % | | |
|---------|----------|----------|----------|
| | Sample 1 | Sample 2 | Sample 3 |
| Na | 1 | 1 | 1 |
| Mg | 1 | 1 | 1 |
| Al | 1 | 1 | 1 |
| Si | 2 | 2 | 2 |
| P | 3 | 3 | 2 |
| S | 5 | 5 | 5 |
| Cl | 1 | 2 | 1 |
| K | 1 | 2 | 2 |
| Ca | 85 | 84 | 85 |

Table 3 Sample of red paint from the false proscenium border (RB1) made by J.T. Bull.

| Element | Weight % | | |
|---------|----------|----------|----------|
| | Sample 1 | Sample 2 | Sample 3 |
| Al | 1 | 7 | 2 |
| Si | 1 | 28 | 4 |
| P | – | 1 | – |
| S | – | 4 | 24 |
| K | – | 2 | – |
| Cl | 11 | – | 2 |
| Ca | 9 | 7 | 37 |
| Ba | – | 5 | 8 |
| Cr | – | – | 5 |
| Fe | – | 46 | 18 |
| Pb | 78 | – | – |

appearance, was less stable. It is thought that a higher amount of medium was used when the paint was made, making it more prone to drying out and cracking, and causing it to separate more readily from the ground layer when flexed.¹⁶ The use of underbound paint appears to have created a more stable surface for these flexible painted cloths.

Analysis of the paint, using EDS, on Hinchey’s street scene backdrop (Table 1) and a woodland scene flat (46) made by Douglass (Table 2) showed relatively high levels of calcium whereas lower levels were found on the false proscenium border (Table 3). The presence of calcium indicates the possible use of chalk or lime, which could have been mixed with the pigment to make distemper. The higher levels of calcium on the flats could be indicative of its presence in the ground layer, and is thought to be popular practice. Lloyds (1875: 14) recommended the best gilder’s whiting (calcium carbonate) for the priming of canvases, mixed with pigments to achieve the desired colours. Blue flecks embedded in the ground layer of the street scene flats were visible with the naked eye. Cross-sections of paint samples from the scenery from two different makers also show blue flecks, possibly indicating that they had used a similar type of ground layer, again suggesting a common use of materials.

Fireproofing

Fire was a high risk in the nineteenth century because gas lights and limelight (a form of stage lighting involving the burning of calcium oxide) was commonly used in many theatres including Normansfield (Earl 2010: 33). Stencilled on the reverse of many of the pieces of scenery can be found the words: 'DRESSED WITH FIRE RESISTING SOLUTION' (Figure 3). As part of the conservation treatment, it was vital to determine whether this fireproofing posed a health risk to conservators, museum workers or the public. Dr Garside carried out EDS to look for traces of arsenic, a known component in nineteenth-century fireproofing treatments. The resolution of the techniques is limited so the elemental compositions are within 1%. Within these limits, the samples did not appear to contain arsenic or other toxic fireproofing elements. However as yet it has not been possible to positively identify exactly what processes were involved in the fireproofing treatments.

It is not clear at what stage of manufacture of the scenery this was applied but as the fireproofing marks vary in font and colour from the different scenic painters' marks, it is thought unlikely that the scene painters would have carried this out. It is possible that the fireproofing was applied by the canvas manufacturer as the stencil lettering font resembles that used by them. The similarity in the fireproofing stencil in style and method of application across all the pieces indicates that it was carried out by one company. Fireproofed flax scenic canvas was recommended in the twentieth century for the production of scenery (Joseph 1964: 54) and it is possible that this was also a well-established tradition in the nineteenth century.

CONCLUSION

Many pieces of the scenery were painted by recognized firms of scenery painters and had been treated with a fireproofing agent, a common practice in nineteenth-century theatres, testifying to the Langdon Downs' highly professional approach to the development of the theatre and its productions.

The scenic painters have used similar canvases and water-soluble paint, suggesting a common approach to scenic art. They appear to have prepared the paints in a variety of ways to create different visual effects such as the appearance of velvet with the use of a powdery paint. They have used different paint layers possibly to enable the scenery to fulfil different functions such as using thinner paint layers on the cloths that needed to be rolled. The materials found on the Normansfield scenery were typical of those used by scenic painters in the nineteenth century with the use of flax, animal glue size, calcium carbonate primer and the manipulation of distemper paint mixes to create different effects (Lloyds 1875). Further study of the published literature and the Normansfield scenery itself has the potential to reveal much more about the scenic painter's art, enabling a better understanding of what this meant in practice.

The building and the collection are now managed by the Down's Syndrome Association, which merged with the

Langdon Down Centre Trust in 2010. A museum celebrating the work of Dr Langdon Down opened in 2012. The set of the original scenery that was conserved, which had been used on the stage for a number of years, has been returned to storage and a facsimile of the scenery is now used for the theatre's regular productions. The collection, in particular the flats which are readily accessible in the purpose-built storage system, is available to researchers by prior appointment.

Further quantitative and qualitative analysis of the pigments and binding media from a wider range of scenes made by the different painters may help to confirm the extent of common practice and reveal much more about the scene painter's art, the craft of theatrical scene makers and inform future conservation. This paper has not addressed the nature and quality of the painting of the various artists but it would be interesting to learn more about the styles used, compare similar scenes made by different makers and learn more about the extent of the repainting of the scenery.

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NOTES

1. Langdon Down's name is associated with the chromosomal condition that now bears his name, Down's Syndrome.
2. Taken from an advertisement for the hospital in the 1890s <http://langdondownmuseum.org.uk/dr-john-langdon-down-and-normansfield/normansfield> (accessed 14 April 2012).
3. Recreation Hall, Wakefield <http://www.theatretrust.org.uk/resources/theatres/show/2127-stanley-royd-hospital-theatre> (accessed 19 April 2012) and Earl 2010: 31–2.
4. Examples of well-preserved sixteenth-century theatres with complete working mechanisms and scenery can be found in Drottingham in Sweden and Český Krumlov and Litomysl in Bohemia.
5. <http://www.theatretrust.org.uk/resources/theatres/show/2007-normansfield-hospital-entertainment-hall-theatre> (accessed 19 April 2012).
6. Further details on the work of Dr Langdon Down and the hospital can be found, most notably, in publications by O'Connor Ward (1996 and 2010) and from the Langdon Down Museum based at Normansfield. Further information about the theatre and general aspects about the scenery can be found in Earl 2010.
7. For details of the conservation treatment carried out please contact the authors (see 'Authors' addresses' below).
8. Flats measure approximately 451–453 cm (H) × 85–192 cm (W); borders measure approximately 170–392 cm (H) × 667–685 cm (W); backdrops measure approximately 462–498 cm (H) × 550–600 cm (W); and walk-through cloths measure approximately 473–553 cm (H) × 620–642 cm (W) with opening 199 × 138 cm.

9. All objects have a unique number TCC 2356 and a part number 1, 2, etc. The rolled cloths also had an 'R' (backdrop) or 'RB' (border) inserted before the part number. For brevity in the text these will be referred to by their part number.
10. Tests were carried out using Shirlastain Fibre Identification Stains. These stains can be used to differentiate fibre types. Further details of the product can be obtained from: <http://www.sdlatlas.com/product/61/Shirlastain-Fiber-Identification-Stains>.
11. Some of the theatres with which Douglass is associated includes: Empire Theatre, Brixton: <http://www.arthurlloyd.co.uk/Brixton.htm> (accessed 17 May 2012); Granville Theatre, Fulham: <http://www.arthurlloyd.co.uk/FulhamTheatres.htm> (accessed 17 May 2012); and New Theatre Royal, Stockport: <http://www.arthurlloyd.co.uk/StockportTheatres.htm> (accessed 17 May 2012).
12. Examples of Douglass's painting can be found at <http://www.artifact.com/auction-lot/richard-douglass-19th-20th-century-pair-of-2r65awwma4-0-m-7a76a77320> (accessed 17 May 2012).
13. Paint samples were examined under stereomicroscope and then tested for the presence of protein using the Biuret test.
14. At that time he was a Research Fellow in Conservation Science, AHRC Research Centre.
15. Although lead oxide is potentially a health issue, risk assessment indicated that the hazard to conservators was minimal if appropriate precautions were taken when handling it. It was considered that the paint would not present a public risk while on static display once conserved as full consolidation was proposed to reduce loss of the powdering paint containing the red oxide (Thompson and Rowe 2003).
16. Jim Dimond, paintings conservator, pers. comm., 1997.

REFERENCES

- Earl, J. 2010. *Dr Langdon Down's Normansfield Theatre*, 2nd edn. London: Borough of Twickenham Local History Society and Down's Syndrome Association.
- Joseph, S. 1964. *Scenic Painting and Design*. London: Sir Isaac Pitman & Sons Ltd.
- Lloyds, F. 1875. *Practical Guide to Scene Painting and Painting in Distemper*. London: George Rowney & Co.
- Rosenfeld, S. 1981. *Georgian Scene Painters and Scene Painting*. Cambridge: Cambridge University Press.
- Rowe, A. 1999. 'Preserving Normansfield Hospital Theatre: evolving a conservation strategy for a museum cum working theatre', in *Preprints of the ICOM-CC 12th Triennial Meeting*, J. Bridgland (ed.), 648–53. London: James & James.
- Thompson, K. and Rowe, A. 2003. *Painted Canvas Scenery for Normansfield Hospital Theatre, TCC Reference 2356*. Unpublished TCC Research Report.
- Ward, O.C. 1996. *Dr Langdon Down of Normansfield*. London: The Friends of Normansfield.
- Ward, O.C. 2009. *Dr John Langdon Down and Normansfield*, 2nd edn. London: Langdon Down Centre Trust.

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