Conservation Project Report

Nineteenth century Japanese wallpaper in the Theatre

Overview

As part of the 2005-2008 refurbishment project a number of major projects were undertaken to conserve and restore key elements of the building’s fabric and contents. One of the most ambitious was a project to conserve the embossed Japanese wallpaper in the lecture theatre, completed in 2007.

The historic theatre, first built in 1801, has 53 panels of embossed Japanese wallpaper. Unlike many Japanese ‘leather papers’, which were manufactured in Europe, the RI’s was actually made in Japan and dates from c.1880; making it possibly the most significant surviving example of its kind in London.

The theatre was fully renovated in the 1930s with major works carried out on the structure. However the importance of the wallpaper, not only as decoration but also as an essential component of the unique acoustic of the Theatre, was fully appreciated and the panels were restored to their original locations. The effect of the panels was observed again during the recent project; when they were removed in late 2006 the theatre became very resonant and the curved surface of the room became a whispering gallery.

The wallpaper bears a pattern of honeysuckle blossom, acorns and horse chestnut fruits among branches and foliage in an arrangement influenced by the Japanese styles fashionable in the last decades of the 19th century. While conserving the wallpaper, a small amount of selvedge which contained the registration number, name of the paper and an incomplete name of a Japanese company name. This told us it was made in Japan and named ‘The Copse’ (the woodland), the registration number and the company name was either R&Co or B&Co (the first letter is incomplete), though it is likely attributed to Rottmann & Co. The same ‘R&Co’ is very characteristic with the Rottmann wallpapers found in the Whitworth Art Gallery Collection in Manchester, where the ‘R’ is difficult to make out, similar to the RI paper. While conserving the wallpaper, Mark Sandiford found that the material used was originally made using recycled paper, backed on textile.

It is likely that the pattern is of English design and was sent to the factory for production, as was the case with numerous imitation leather papers manufactured in Japan solely for export to Europe.
A small amount of selvedge can be seen on this panel, which shows the registration number, name of the paper and a Japanese company name.

Although fragments of imitation leather wall coverings have survived in museum collections and on decorative screens in public and private interiors, it is unusual to see a surviving scheme of such quantity and quality.

Before conservation, the picture shows where the wallpaper was painted over with oil paint.

No direct records in our archives have thus far been found. The RI’s 1870 Managers’ Minutes record, thanks to Owen Jones a prominent member of the Arts and Crafts movement, ‘for his valuable aid in the adornment of the theatre’. Research has been carried out through the V&A library and the National Archives, where the registration number was checked against samples. The registration number has been used three times, the first two samples were not a match, and the third sample was missing. We believe the RI would have employed an architect or project manager such as Owen Jones, to undertake the work and they would have kept all the records.

However, archival research at the National Art Library and the National Archive has provided valuable information about the provenance of the paper.

Wallpaper History

Paper was invented in China around the 2nd century AD but it is not known exactly when it was first used as a wall covering. It is thought that wallpaper began in Europe as a cheaper alternative to the tapestries hung in the houses of the rich both as insulation and decoration. It was originally made of small sheets of paper printed with floral designs but as its popularity grew the sheets were connected to make rolls and the designs became more elaborate. By the 18th century, coloured papers were in vogue and those from China were very popular.
In the 19th century printing presses for producing wallpaper on a much larger scale were introduced, allowing all but the poorest households to paper their homes. However, handmade papers such as Japanese ‘leather paper’ were still prized by the more well to do. ‘Leather paper’ is made by a very labour intensive process: the decorative pattern is carved onto a wooden cylinder and thin pieces of paper are then applied to the surface and hammered into the mould to create an embossed paper with a texture similar to leather. The paper was fashionable in the later 19th century and used in prestigious buildings, including the Royal Institution. To keep up with demand much of the ‘Japanese’ paper was actually made in Europe however our example was actually made in Japan, as can be seen in the image below.

As with many trends, the use of wallpaper has fallen in and out of fashion; it is currently seeing an increase in demand and many companies are using their archives to recreate the styles of the past. In Japan the art of making ‘leather paper’ by traditional methods is being revived by Mr. Takashi Ueda of the Kinkarakami (literally ‘golden foreign-origin leather paper’) Institute. In his collection of paper there is an example very similar to the one at the RI, (it is called ‘Irifune no Mori’ which is translated as Irifune forest,) the sample formed part of last year’s exhibition ‘Kinkarakami and the art of Japanese ‘leather paper’ at The Daiwa Anglo Japanese Foundation, London.

**Conservation of the Wallpaper**

**Condition**

Mark Sandiford of Sandiford & Mapes was the wallpaper conservator contracted to undertake the conservation work. His report noted that the physical damage and degradation are obvious and extensive. Constant abrasion, particularly at seated head height, has led to loss of areas of the decoration, leaving the laminated paper exposed and vulnerable to picking, peeling and graffiti.

Severe cracking was evident on most panels due to the movement of the wooden panelling behind. A fibre sample was taken and showed the fibres to be short, Japanese fibre tend to be long. The conclusion was taken that the fibres had become short due to environmental damage, resulting from fluctuations in the relative humidity and past materials used such as the wood and asbestos found behind the wallpaper. The surface of the wallpaper had been painted with many layers of bronze/gold
oil paint and the top layer had green oxidation. The embossed design was hidden underneath layers, it was decided that further investigation would be needed before we could proceed.

Damage to the wallpaper

**Tests on material**

Gregory Howarth, art conservator was commissioned to investigate the layers of paint and original materials; this provided us with vital information on how the original layers were constructed and the process of cleaning the surface material. Following the recommendations and results found by Gregory, the decision was taken not to remove the oil paint. The layers were thick and if removed would cause major damage to the surface, original shellac and watercolours. Further work was commissioned, to clean the surface layer of paint; this removed the green oxidising, created a better surface to take the moulds and helped clarify the embossed pattern.

When removing the beading, the nails were found to go through the wallpaper, to the wooden board and into the asbestos behind, the long nails showed small fibres of asbestos. An asbestos company were called to verify the material, the HSE were alerted and worked stopped for two weeks. It appears in the 1930’s project, the spaces behind the wallpaper were filled with asbestos, and no record of this work exists. Under Mark’s supervision, the asbestos company used his tools to remove the beads and nails. When replacing the beading, short nails were used to prevent future problems.

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Active Conservation

Mark Sandiford’s extensive work entailed active conservation to clean the surface, consolidate the deteriorating paper, line the backing paper; moulds were taken and missing areas reconstructed and inpainted. Before the panels were restated, square pockets of Japanese tissue were installed; this provided a barrier in between the wood and the wallpaper. Also, allowing the wallpaper to breath and move when environmental conditions change.

Active conservation, removal of French polish finish.

Mark was commissioned to make three additional panels, where an old projection booth had been removed. The panels were taken from the original moulding design and finished in the standard as the originals.
Active conservation, lining the wallpaper

The successful completion of this project has restored the theatre of the Royal Institution, with its wonderful acoustic, to a pristine state. The project was finished in December 2007. The condition of the paper will be monitored constantly to ensure that it remains in that state as a suitable venue to the successors of Davy, Faraday, Tyndall and Porter, to continue communicating science to a wide audience.

My thanks to Mark Sandiford and Daniel Gillberg from Sandiford and Mapes, who undertook this huge project and to Christine Woods and Marion Maule for their help and research.