

Conservation Project Report

Grand Staircase Project

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 these projects was to conserve the Grand Staircase wood and metal work, which finished in November 2007.

The Grand Staircase Hall is one of the most impressive rooms of the Royal Institution (RI). Research carried out for the project has identified it as the building's only surviving Georgian interior with both the staircase and the plasterwork pre-dating the foundation of the RI.



The Grand Staircase hall in 2005 before works began.



Detail of staircase banister.

Research undertaken by Prof. Frank James identified strong circumstantial and design evidence that this work was undertaken to the designs of John Carr (1723-1807), the leading architect in the North of England at the time. Carr worked on a range of projects including the designs, extensions and interiors of public buildings and country houses for the nobility and gentry. He occasionally worked on a larger scale, notably the Crescent in Buxton and throughout his career he was responsible for the development of York, of which he was twice Lord Mayor.

Carr's connection to No. 21 Albemarle Street is through his friendship with William Mellish, the owner of the building during the late 18th century. He undertook a considerable amount of work for Mellish at his Nottinghamshire seat Blythe Hall in the 1760s to 80s and there is also evidence that he stayed at No. 21 when in London.

Elements of the staircase itself and the plasterwork of the walls and ceiling are stylistically similar to work by Carr; however it wasn't until analysis of the paint layers showed the full extent of the surviving material that the importance of the room appreciated. In the context of the widespread loss of historic interiors at the RI the hall is a remarkable survival of unparalleled architectural significance. To reflect this it was decided that the staircase should be restored and the room returned to a close approximation of its 18th century colour scheme.

The conservation project focused on conserving and restoring the balustrade of the staircase which had sustained damage and losses to both the metal banister and the wooden handrail. During the project two teams of conservators from different companies worked together, the first part of the project involved the restoration of the mahogany handrail and the second the metal work.

The conservation of the staircase was completed in November 2007 and the banister was boxed in for protection during the remainder of the project. This allowed the plasterwork to be repainted using colours identified from the paint layer analysis and specially mixed.

Timescale

The breakdown of the project:

First Stage:	Site work, Wood Restoration, Warring & Lansdall for 2 weeks : removal of mahogany handrail prior to conservation of metalwork.
Second stage:	Site work, Metal Conservation, Rupert Harris Conservation, 11 weeks: conservation and painting of metal banister.
Third Stage:	Site work, Wood Restoration in Warring & Lansdall report, 14 weeks: replacement of handrail and finishing.
Total:	27 weeks (7 months), the project finished 6 weeks earlier due to work under taken off site.

Metalwork Conservation

Undertaken by: Rupert Harris Conservation
Studio 5c
Block A
1 Fawe Street
London,
E14 6PD
Tel: 0207 515 2020

Time on site: 11 weeks

The report compiled by Angus Fisher of Rupert Harris Conservation on work undertaken to conserve the metal can be viewed in a separate document.

Mahogany Handrail Restoration

Undertaken by: Scott Bowran
Warring and Lansdall,
33 Nightingale Road,
Carshalton,
Surrey,
SM5 2DH.
Tel: 0208 669 2864

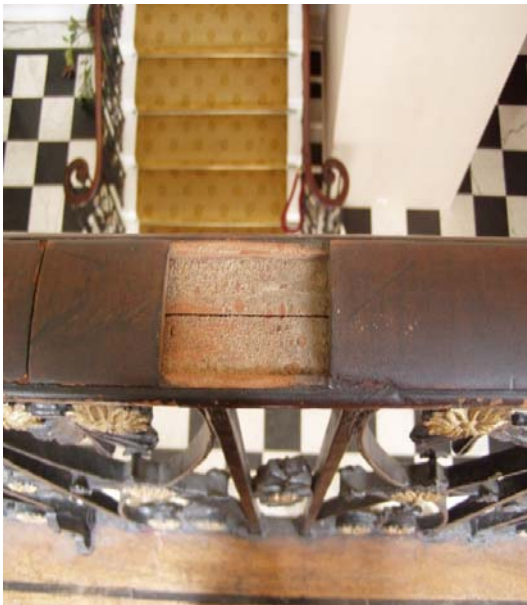
Time on site: 16 weeks

A report by Scott Bowran on the restoration of the handrail can be found in the June 2009 issue (No. 37) of the BAFRA journal.

A summary of the work is given below.

Condition of the woodwork

The handrail was originally constructed using lengths of mahogany, moulded and shaped on both sides, with additional short grain domed sections of mahogany inserted into the top.



A missing panel from domed top of handrail



Damage to the handrail corner including an old repair.

The mahogany inserts had become loose having shrunk, and in some areas had been replaced. Where the handrail was jointed, all the corners were badly damaged and further attempts to repair these areas had only weakened the structure further.

During the project the signature I. Simpson and the date 1780 were found on the bottom left hand side inside the original structure. It was often common practice to include a signature while producing the original design and confirms the dating of the handrail to the Georgian period.



The carved name and date discovered on the underside of the handrail

Restoration of the handrail

For restoration and to allow for the conservation of the metalwork the handrail was removed in sections and moved off site. The sections were then cleaned and the layers of old finishes carefully removed.

The restoration process involved replacing the badly damaged sections with “new” pieces of period mahogany. All of the inserts were repositioned and the missing areas replaced.



Panels on top of handrail before and after treatment

Reinforced corner to provide structural stability.

The handrail was positioned back onto the restored metal balusters with all new sections then being carved to match the surrounding areas. The structure was unstable and major damage had occurred to the corners of the wooden structure meaning they would have to be rebuilt. After discussion between all parties it was decided to re-enforce the corners with small metal pieces, as shown in the image above.

The final stage was to preserve the original patination and to blend the new inserts to match the original material.



The wooden handrail back in place on the conserved metal banister.



The Grand Staircase Hall, May 2009.