Interdisciplinary collaboration to understand and recreate the splendour of the Marble Closet at the Little Castle Bolsover

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**Abstract**

This paper examines the process of the research carried out to establish the structural and decorative history of the Marble Closet of the Little Castle Bolsover in Derbyshire, UK. Research established that the initial fitting out of the room was carried out c.1616 but was refitted c.1619 and decorated with copper resinate glazes and crimson taffeta hangings. Research into the interiors revised the dating of the structural completion of the building to c.1616. The research process and the recreation of the original scheme benefited from multi-disciplinary collaboration of paint analysts, textile conservators, conservation architects, house-painters, metal-smiths, stone conservators and paintings conservators. The research questions the methodology of traditional architectural history and its reluctance to engage with more holistic approaches to historic interiors research.

**Keywords**
Seventeenth century interiors; Copper resinate glazes; Hangings; John Smythson; Black and white marble; Charles Cavendish

**Introduction**

The investigation and representation of the Marble Closet of the Little Castle Bolsover in Derbyshire, England, involved the close collaboration of various specialists, and provides a useful illustration of meaningful interdisciplinary collaboration, and the synergy this generated. The project also demonstrates the importance of challenging given ‘truths’ established by existing research methodologies. These truths are often upheld by nothing more than disciplinary hierarchies and convention. The research paradigm of historic interiors research and other allied conservation disciplines provides new insights into decorative conventions and historic technologies, identifies phases of change, and may even offer an insight into the minds of the people who made these changes. This paper asks if these new approaches are being fully utilised within the heritage sector.
The Little Castle Bolsover

Designed and constructed by the architect/surveyors Robert Smythson and his son John, for Sir Charles Cavendish, construction of the Little Castle (Figure 1) began in 1612. Located on a dramatic promontory, built on the site of an earlier medieval castle, the Little Castle is a mysterious and perplexing building. It is a delightful caprice of the Chivalric Revival, a fake Norman Keep fitted with Jacobean interiors. Historic Interiors Research has contributed to a new understanding of the structure’s construction dates, and establishing that the building and many of the interiors were completed by 1616, much earlier than previously thought. Sir Charles died in 1617 and his son William completed the project but made radical revisions to several of his father’s interiors and the exterior of the building. The changes made by William pin-point a significant change in taste which occurred during the second decade of the seventeenth century in England, the direct result of Inigo Jones’ tour of the Continent, when Gothic revival gave way to Classicism. The Little Castle is now in the care of English Heritage. It has been uninhabited since the late nineteenth century and is presented to the public without any contents or furnishings.

‘The rooms have a curious living stillness the music of bundles of instruments carved on the chimney-pieces has only just died away. One wanders through them entranced but also puzzled, for Bolsover is like nothing else in England. It is a completely convincing expression of something, but of what? [Girouard, 1985]

The Little Castle had been subject to traditional building history analysis which ‘has to a considerable extent remained a largely visual scholarly activity’ [Williams, 2009], focussed primarily on the careers of the architects, its plan and layout, the iconography of the painting,
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Figure 2: Marble Closet – Window wall with blue paint applied in 1976 © Helen Hughes

and the sparse documentation, with often surprisingly little examination of the building itself being carried out. Mark Girouard, the author of the major work on Bolsover Castle *Robert Smythson and the Elizabethan Country House* published in 1967, suggested that Smythson had little involvement in internal detail of the buildings he designed. Girouard suggests that analysis of the interiors is problematic because they have been remodelled or redecorated. A campaign of restoration of the interiors of the Little Castle, undertaken in 1976, respected the spectacular series of early seventeenth century wall and panel paintings, but took a rather cavalier approach to the surviving original decorative finishes which were stripped off to expose bare oak or over-painted, giving the interiors an unfortunate uniform and sanitised appearance [Hughes, 2000].

In 1990 I was tasked to establish the original decoration and inform a more accurate representation of the principal interiors. As an historic paint specialist with a background in architectural history and painting conservation, I concentrated my initial investigation on the search for architectural paint finishes. I admit that I had little awareness of the importance of tapestries and hangings. But as I attempted to unravel the decorative history of the building I realised that I needed to address my ignorance if I were to understand early seventeenth century decorative conventions.

Geoffrey Beard’s book *Upholsterers and Interior Furnishing in England 1530-1840* was a useful preliminary guide, illustrating that a completely different value system of decorative
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finishes was in operation within historic interiors during the sixteenth and seventeenth centuries [Beard, 1997]. Although the paintings within the Little Castle are now valued very highly, in the early seventeenth century when they were executed they would have been considered as a much cheaper, even second rate form of decoration. The 1614 inventory of the Earl of Northampton clearly reveals the relative value of textiles and paintings at this time. While ‘a picture at large of Prince Henry on horseback in armes’ was only valued £4 ‘a plaine black velvet cloke lined with sabels, the back part much worn’ was valued at £30.

The Marble Closet

The Marble Closet (Figure 2) located off the main Chamber and was designed to function as an intimate withdrawing room or closet. The room is named after its distinctive extant black and marble vault, chimneypiece and tiled floor. There is evidence to indicate that the room was originally fitted in 1616 a conventional manner, with a flat plaster ceiling and cornice. But our research suggested that c.1619 the room was radically altered by William Cavendish as part of his up-dating of his father’s project. A structural survey of the room carried out by the conservation architect Mark Askey suggested that the original ceiling, cornice and possibly original chimneypiece was removed and replaced with the existing marble vault, chimneypiece and tiling. The original window of the Marble Closet was removed. A new and novel French window was inserted, set within an Italianate architrave, and leading onto a small metal balcony (Figure 3). The scars of these alterations are clearly visible on the west facade of the Little Castle. But before we made this observation, it had been believed that the construction of the Little Castle had not progressed beyond the ground floor before 1619.

Figure 3: The Little Castle Bolsover – Architrave and balcony inserted c.1619
© Helen Hughes
The inspiration for these alterations were the new works being carried out in London by the architect Inigo Jones, fresh from his tour of France and Italy. Eminent courtiers of James I were having Italianate features such as balconies and architraves fitted into their London townhouses. William Cavendish’s own architect John Smythson visited London in 1619 and had made drawings of examples of these new works. On his return to the estate, Smythson copied these elements and incorporated them into the recently completed Little Castle Bolsover.

An undated perspective drawing by John Smythson relates to the alterations made to the interior of the Marble Closet at this time. Annotations on the reverse of the drawing suggest it was modelled on ‘My Lord Rich’s Chamber’. While Lord Rich may be identified, there is no record of his inspirational room. A black and white marble fireplace was fitted and the lime-ash floor was covered with black and white marble tiling. Four canvas paintings depicting the Virtues and angel-heads, set in heavy black and gold frames, were fitted into the lunettes beneath the vaults. All of these elements survive (with the exception of the French window that was removed in the early nineteenth century and replaced by a half-length sash window). These radical alterations proclaimed William Cavendish’s awareness of the latest Italianate fashions, and also updated his father’s rather outmoded Gothic folly.

The Smythson perspective drawing suggested that the room had been hung with draped hangings. An inventory taken after William Cavendish’s death in 1676, records that the Marble Closet was fitted with a ‘sett of crimson taffetie hangings’ which may have been hung like those shown in the Smythson drawing. The inventory notes show that at this time the room also contained ‘2 backt Chares; 2 couches with taffity quilts; 1picttur; 2 stands & 1 table; 1 looking Glas’. The room would have been sumptuous.

After the death of Sir William, the family made little use of the Little Castle but retained it a quaint relic of former times. An inventory taken in 1717 lists vast amounts of old and rotting flea-ridden fabrics and furnishings, creating a rather dismal picture of Visconti-like decayed grander: ‘thirty eight cusheons moth eaten...two moth eaten feather beds...three ragged curtains four rotten feather beds...’ If the hangings in the Marble Closet had not been discarded at this time, they were probably removed c.1750 when the Little Castle Bolsover was tidied-up by Sir William’s descendent the Countess of Oxford.

Figure 4: Marble Closet – Cross-section Copper Resinate glaze applied to softwood
© Helen Hughes
All of the panelling in the rest of the Little Castle was made of oak. The walls of the Marble Closet are lined with softwood panels. When I began my research I was informed that this softwood panelling must have been added during the nineteenth century when the Little Castle was occupied by the local vicar who had removed the original French windows. However preliminary examination revealed that the panelling had originally been decorated in a rich translucent green copper resinate glaze (Figure 4). As this decorative finish was extremely costly and had become obsolete during the eighteenth century it was reasoned that it was unlikely to have been applied by the nineteenth century vicar.

The belief that softwood was not used in buildings during the sixteenth and seventeenth centuries is a dangerous myth for historic interiors research, which is readily disproved by William Harrison’s ‘Description of England and Britain in 1577’ which provides a useful summary of the decorative conventions of the late sixteenth century,

‘the wals of our houses on the inner sides either be hanged with tapisterie arras worke or painted cloths .. or else they are seeled with oke of our owne, or wainscots brought hither out of the east countires whereby the roomes are not a little commended, made warme, and much more close than they would have been’

[Harrison, 1575].

Harrison makes it explicit that interiors were normally hung with hangings or ‘seeled’ with wooden panelling, either English oak ‘oke of our owne’ or imported softwood ‘or wainscots brought hither out of the east countires’. Another contemporary document is a survey of the interiors of the royal residence Wimbledon House drawn up in 1649, which describes how the finer rooms were partially fitted with oak panelling with tapestries hung on the inner walls. But one high status room described as ‘the lord’s chamber’ was described as ‘a room intended for hangings and for the purpose set around with slit deale’ (softwood). This room seems to have been fitted with softwood panelling like that found the Marble Closet. The realisation that the Marble Closet retained its original panelling was a break through moment for the research. A comprehensive series of paint samples was removed from the softwood panelling. These revealed that the green glaze had only been applied to the outer edges of the wooden panels – less than 20% of the surface area of the panelling. Only the panelling flanking the French window on the west wall and the over-door panel on the north wall had been fully painted (Figure 5).

Figure 5: Marble Closet – Elevation of chimney wall indicating the placement of the copper resinate glaze © Helen Hughes
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The research findings posed a dilemma for English Heritage. It was now evident that the original decoration of the room could not be recreated without the installation of the hangings, as it would be extremely problematic to present partially painted softwood panels. The decision was made – a slight revision of the original policy – to attempt to recreate the ‘cremson taffetie hangings’. The paint analysis and the documentary evidence provided a unique opportunity for Annabel Westman, an historic textiles expert, to determine the original design and placement of the hangings (Figure 6). She set about trying to locate the original fixing holes but discovered that the upper members of the panel frames had been replaced in 1976 and this important archaeological evidence had been lost. But correlation of the Smythson perspective and the placement of the green glaze suggested that the hangings were probably suspended by rings hung on metal poles fixed between the corbels. Large scale trials were carried out. As Annabel dropped the fabric it fell in folds below the corbels exposing areas that had been painted with the green glaze. Observers of the trial felt we were watching the Smythson drawing coming to life. Because the room would be unsupervised, Annabel suggested using a cheaper ‘sacrificial’ crimson silk, rather than an expensive taffeta, as they would no doubt be subject to some degree of handling by the public.

The next task was the recreation of the copper resinate glaze, a painted finish which had not been formulated since the eighteenth century. Copper resinate is produced by dissolving distilled verdigris in an oil/resin varnish. Although the first house-painters’ handbook to be published in England The Art of Painting, written by John Smith in 1676, was printed some
50 years after the work at the Little Castle was completed, it provided helpful instructions for the manufacture of basic verdigris. Smith describes this as

‘the best and most useful Green of all others...tis a Colour made out of Copper, being no other than the rust of that mettal promoted by the fumes of sour wine, and the rape of Grapes: the process of which as ‘tis performed at Montpelier in France (where the best is said to be made)’ [Smith, 1676].

The ‘rust of the mettal’ he mentions is the blue corrosion product copper acetate, which requires a great deal of grinding before it is suitable for use as a pigment. Although Smith later mentions a refined type of verdigris, he makes it clear that he considered it too expensive for use in house-painting. ‘at the Colour-shops there is a sort of it that they call distilled Verdigrease, being the sort that is wholly purified from the dross and filth, of good use in fine work, but too dear in vulgar painting’. Smith offers no advice on the manufacture of copper resinate glazes. We embarked on producing quantities of distilled verdigris required for the decoration of the Marble Closet, beginning with the corrosion of copper piping over acetic acid, but soon appreciated why the product was so expensive and reserved for fine work – the process was long and laborious. Additional research established that copper acetate purchased from chemical suppliers produced a copper resinate glaze that was of no appreciable difference to that made from our labour-intensive ‘home-made’ batches. We made a pragmatic decision and opted for the off-the-shelf option.

Media analysis of the original glaze, carried out by Brian Singer of the University of Northumberland, established that it contained a mixture of linseed oil and pine resin and possibly a small trace of shellac. Working in close collaboration with Greenings of Doncaster, the painters who would apply the copper resinate glaze to the Marble Closet panelling, small scale tests were carried out to produce a workable glaze which could be produced on a larger

![Figure 7: Marble Closet – Tom Greening applying copper resinate glaze © Helen Hughes](image)
scale. To produce the copper resinate glaze, 25g rosin (basic pine resin) was dissolved in genuine turpentine and then mixed with 100ml linseed oil. Then 7g of copper acetate, was added to the mixture in crystal form and heated gently until the crystals had dissolved. The resultant emerald green glaze (stored in a sealed container) could be thinned with genuine turpentine to produce a brushable paint. In passing we realised that this was probably the ‘green in oil’ referred to in various sixteenth and early seventeenth accounts. It was observed that the addition of more linseed oil reduced the brittleness of the glaze. When applying the glaze to large areas of the panelling (Figure 7), Tom Greening, the senior decorator at Greenings of Doncaster, noted the problem of white ‘flashing’ or blanching, caused by the turpentine evaporating too quickly. This made it difficult to obtain an even surface. He devised a method of re-wetting the surface of the glaze with turpentine as he applied successive coats (in some places 5-6 coats were applied to achieve a deep and even glaze). As the project progressed Tom commented that he gained an insight into his seventeenth century predecessor, ‘I know what he was thinking!’

The representation of the Marble Closet also involved the expertise of stone conservators who repaired and cleaned the black and white marble; painting conservators who examined and surface cleaned the four canvas paintings, and the ironsmiths who conserved the original iron balcony (which incidentally is now recognised as the oldest surviving balcony in the UK). The green copper resinate glaze was used to tint the green lead-based paint applied to the iron balcony. This reconstruction was based on physical evidence of the original scheme and a John Smythson coloured drawing.

Figure 8: Marble Closet – Completed scheme © Helen Hughes
Conclusion
And so finally the green copper resinate glaze was applied and the crimson hangings were installed (Figure 8). It was noted that the naked Virtues depicted in the paintings were swathed in emerald green and crimson coloured silks which were now off-set by the green glaze and new hangings, recapturing the original visual unity of the room. The Marble Closet provides a glimpse of how life was lived not only at Bolsover, but the palaces of King James I and the houses of his courtiers, which the Cavendish family were so anxious to emulate. The room has now been brought to life reflecting something of its original extravagant luxury. The new presentation of the room, is one of the outputs of the of the research, and may be considered an exercise in experimental archaeology [Mathieu, 2002]. It has been in place now for ten years and English Heritage may evaluate the success of the chosen presentation option. With hindsight we could improve the formulation and application of the green glaze, and the tailoring of the hangings. It may be argued that as long as the Marble Closet remains unfurnished, undue prominence is given to the hangings, and that the balcony is meaningless unless accessed by a reconstruction of the 1619 French windows.

It needs to be stated that it is the knowledge gained during the course of the research, and how it was gained, that is perhaps the most significant aspect of the Marble Closet project, not the current representation of the room. A synergy was created which allowed researchers to ‘get inside each others’ minds’ and solve a wide range of problems. The success of the Marble Closet project depended on the creation of a climate which allowed and encouraged all parties to take the time to understand each others’ values and methodologies, to share knowledge, and engage in discussion and debate. In the spirit of collaboration specialists displayed a readiness to think outside their own professional conventions. Too often, purported multidisciplinary research projects are merely a collection of commissioned reports carried out in isolation, and often delivered to an architectural historian or curator who may not have the breadth of vision or competencies to recognise the significance of new findings and advance them, especially if it highlights the limitations of their own research methodologies or existing interpretations [Williams, 2009]. As a result of this restriction important research findings are often not disseminated.

The real value of historic interiors research is its potential to clarify and explain periods of change, identify what was done and perhaps more significantly offer explanations of why it was done [Hughes, 2008]. Stylistic analysis and scrutiny of surviving documents has its limitations. A more holistic approach that also focuses on the pathology of the building to establish its ‘biography’ is perhaps a more appropriate methodology for building analysis, and, as the Marble Closet research demonstrates, often provides an insight into the minds of those who created and modified them.

References


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Biography
Helen Hughes (Art Historian-Conservator-Restorer) has enjoyed and rich and varied education and professional training. At this point of her career she has paused to find an appropriate job title that encapsulates what she offers the heritage sector. She has decided to describe herself as an ‘architectural historian who is not afraid of technology’. This is not to say that she is not immensely proud of her qualification as accredited conservator-restorer, but is trying out this new job description as a challenge to traditional hierarchical dominances and outmoded myths. The high level multi-disciplinary competencies of conservator-restorers needs to be highlighted and celebrated. Conservation as a discipline offers a synthesis of both documentary and physical evidence to offer new understandings and inform the management of our cultural assets. She suggests that allied disciplines should review their methodologies in the light of new ways of examining buildings and objects. (Historic Interiors Research & Conservation, 5 Fulbrook Mews, London, UK, N19 5EN, hh@historicinteriorsresearch.co.uk, www.historicinteriorsresearch.co.uk).

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