

## Montague Tomb Bath Abbey Paint Analysis



### Report on Findings

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## Introduction

The memorial to James Montagu (1568 – 1618) is located in the North aisle of Bath Abbey, Somerset. It was originally surrounded by a set of simple, painted iron railings with a crest or shield mounted on an extended post on each side. These railings were removed in the more recent past and placed into storage.

Peter Meehan ACR, of The Historic Metalwork Conservation Company Ltd (HMCC) visited the storage site on Tuesday 23 July 2024 to view the railings and to take paint samples from each different type of component. The samples were transferred to the company’s office for closer examination.

## Background Information

### Bishop James Montague

James Edward Montague was born in Northamptonshire in around 1568 to Sir Edward Montagu of Boughton (a landowner and politician) and Elizabeth Harington. After graduating from Christ’s College, Cambridge he became the first Master of Sidney Sussex College, also in Cambridge, in 1596. By 1603 he was the Dean of the Chapter Royal, part of the Royal Household, and became close to King James I. He was a Calvinist and with others, introduced the king to several radical religious figures including the Puritan Arthur Hildersham, Henry Jacob and John Burges.

He was made Dean of Lichfield from July 1603 before moving to be Dean of Worcester in December 1604. In 1608 Montague was made Bishop of Bath and Wells with an enthronement at Wells Cathedral. As the Bishop he spent large sums of money restoring the Bishop’s Palace at Wells. He also spent much of his own money on repairs to Bath Abbey. The Abbey had been left empty after being closed by King Henry VIII in 1539. It had subsequently been given to the City of Bath and Queen Elizabeth I allowed a national collection so it could be restored. Bishop Montague paid for the nave to be re-roofed. Upon his death in July 1618 an alabaster tomb was built to house his body. The effigy was carved by Nicholas Johnson and the tomb was constructed by William Cure, a stone mason.

### Tomb Railings

The tomb was originally surrounded by a series of simple railings made of wrought iron. There was a large, forged square post at each corner with a tenon sitting down into a stone base forming the monument’s plinth. Fixed to each at ground level was a flat iron rail with round holes in set at regular intervals into which fitted the tenons from the perimeter railings. The square railings were

set on a diamond and passed through a top rail. Each is topped with a spike finial with a pair of forged collars below. The top rail is angular in shape with the vertical face decorated with simple connected semi-circles along the top edge and a recessed line at the bottom edge. Sitting on top of each corner post is a decorative flag staff with lower barley twist section, forged 'C' sections and topped with an iron cross. Fixed to each of the corner staffs, beneath the cross, is a flag painted with one of two family crests.



One of the flags displaying one of the family crests fixed to two corners of the tomb railings.



The other family crest painted onto the corner flags to the tomb railings.

At the centre of each long side of railings is an additional post with a painted, circular plaque on top displaying the family crest set within a painted belt containing the words from the Order of the Garter.



One of the two circular plaques to the long side of the railings showing the family crest set with in the Order of the Garter.

Apart from the crests and plaques the remaining ironwork forming the railings to the tomb are all currently finished in a dark red colour.

### Paint Sample Locations

A total of 16 no paint samples were taken from the various components that make up the railings that originally surrounded the tomb.

The sample locations are recorded below:

Sample Reference	Sample Part	Sample Location	Comments
Paint Sample01	Paling	Centre of paling	At an edge
Paint Sample02	Paling	Base of paling	Edge above tenon
Paint Sample03	Gate panel	Paling	Below lockbox location
Paint Sample04	Top rail	Top face	Close to rail end
Paint Sample05	Top rail	Top face	Next to paling hole
Paint Sample06	Post	One side	Just above base
Paint Sample07	Post flag staff	At base of staff	Knuckle section supporting 'C' pieces
Paint Sample08	Post flag staff	'C' décor piece	Face of 'C'
Paint Sample09	Post flag staff	Top cross	At break to top arm
Paint Sample10	Ground rail	Top face	Next to post hole
Paint Sample11	Top rail	Top face	Next to paling hole
Paint Sample12	Short Ground rail	Top face	At rail connection end
Paint Sample13	Rail	Outer side face	Below semi-circle lining
Paint Sample14	Post	Foot tenon	Under edge of post by tenon
Paint Sample15	Long side centre post	Side	Halfway along post
Paint Sample16	Gate panel	Bottom rail	Underside of rail

## Analysis Methodology

### Introduction

The samples were taken from the metal surface using a sharp scalpel ensuring the base layer was removed. Where possible existing flakes were lifted away. Samples were placed in a re-sealable polythene bag with the sample number, location and photograph number recorded on the bag.

### Sample Preparation

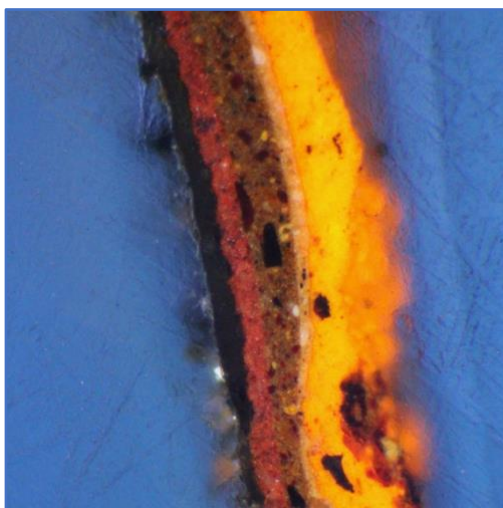
Samples were examined to identify the most suitable one for more detailed examination. These were set to one side ready for cross sectional analysis.

The samples were set in a water clear polyester resin and cut in half once cured. The cut face to one half was polished using various grades of abrasive paper (240, 400, 600, 800 & 1000 grades) to allow them to be inspected under a binocular microscope. The resin holds the paint layers together and allows a polished flat plane to be viewed at a high magnification.

The interpretation was carried out by Peter Meehan ACR of HMCC Limited and Richard Baister ACR of Heritage Project Management.

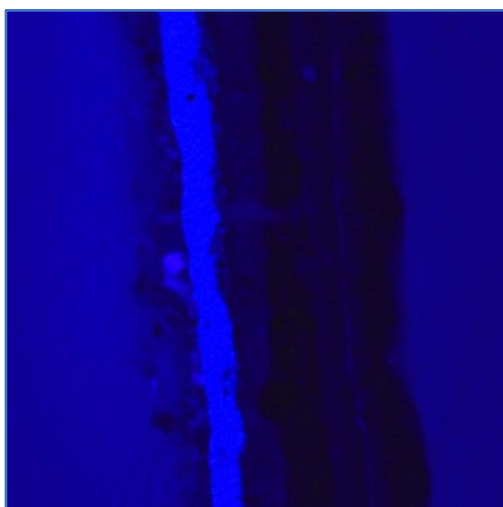
## Summary of Findings

The main purpose of the analysis was to see the extent of the number paint layers and the colour history. Examination revealed that nearly all the samples appeared to have the same sequence of paint layers and that the tomb railings appear to have only been painted once, with the possible exception of the gate panel. A typical cross-section can be seen below from a sample taken from the top rail:



*Fig. 1: Typical paint sample cross section.*

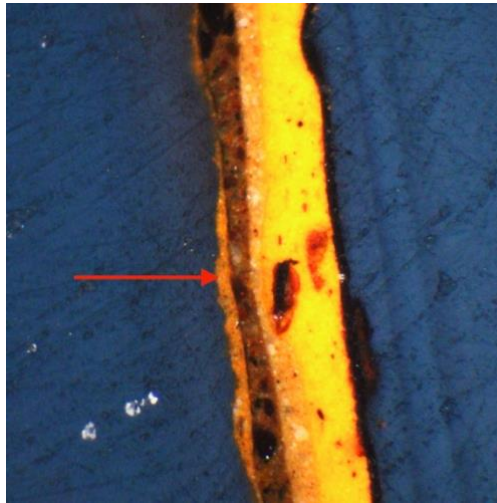
On most samples the earliest paint layer is a forge paint, a thick black layer that would have been applied by the blacksmith after the railing parts had been forged. This is followed by a layer of red lead primer. There is a pink coloured intermediate coat followed by two layers of topcoat with the second one being a dark red colour. On a number of samples, a final 'black' layer is visible. This appears to be a resin varnish layer that would have been applied to give a gloss finish to the paintwork. We know this is a resin varnish layer as it can be seen to fluoresce under UV light. This varnish layer was not found on all of the samples and is probably because it has degraded over time.



*Fig. 2: The varnish layer fluorescing under UV light.*

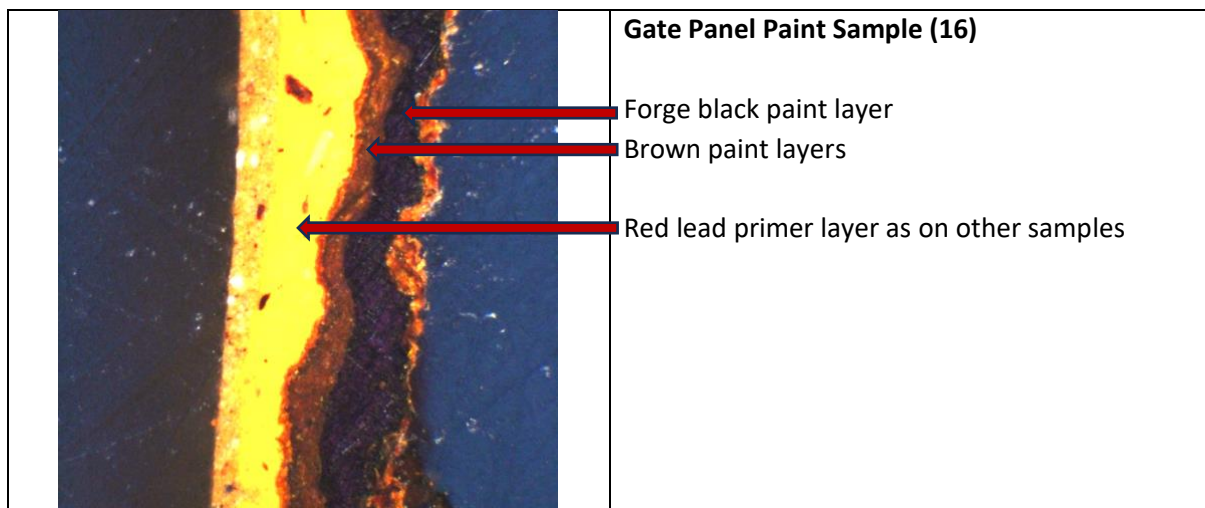


The paint sample taken from the decorative 'C' section to one of the flag staffs had evidence for another paint layer on top of the dark red topcoat, a possible yellow layer. This was possibly a base coat for gilding but no evidence for this was found.



*Fig. 3: Additional yellow paint layer above the original dark red.*

One of the paint samples taken from the gate panel had an additional set of paint layers that are earlier than the layers found on all the other samples. These brown layers sit on top of the blacksmiths forge black paint. This may be because the gate was added to the tomb railings from another location and this original brown finish was overpainted with the tomb railing paint layers.



From the paint samples taken it can be seen that the Montague Tomb railings have only ever been painted once, after they had been installed. This paint finish therefore dates to the early 17<sup>th</sup> century and is a rare survivor of an historic paint scheme. It is likely to have survived as the tomb sits within the Abbey and the paint has largely been protected from the normal agents of deterioration: strong daylight, UV light, high and fluctuating temperatures and rainwater. It has therefore degraded only very slowly but is now very friable being over 400 years old.

The paint finish to the post staff flags and plaques was not sampled for examination. This was because these appeared to be largely complete and would have been disfigured if a number of samples were taken. It is very likely that these have the original paint finishes applied as well. It is recommended that the paint finish to these be preserved through a process of conservation by carefully cleaning and consolidating them.

As part of any plan to reinstate the railings around the Montague Tomb it is recommended that at least a small part of the original paint scheme is conserved and preserved as a possible unique survivor of an early 17<sup>th</sup> century paint finish.

## Paint Sample Record Sheets