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3 LYNDHURST TERRACE, HAMPSTEAD, LONDON
HISTORIC INTERIORS RESEARCH AND ANALYSIS REPORT

PROJECT CONTACT: : MAX CURTIS-DONNELLY, tmd BUILDING CONSULTANTS

5th SEPTEMBER 2020



Celebrating 37 years in Conservation

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NOTE:

This initial section of this report is included to guide the reader in understanding both the process and the findings of the research. For many the discipline of architectural historic paint research or paint analysis in its developed form is a new discipline and a significant advancement on the traditional method known as 'paint scrapes'.

ARCHITECTURAL PAINT RESEARCH: METHOD:

To fully examine the decorative schemes a combination of paint scrapes/uncovering and paint samples were employed. Uncovering helps to analyse the surface of each scheme, whilst paint samples mounted in cross section enable us to examine the decorative history of the room in the vertical plain.

The technique of paint uncovering involves scraping back layers of paint using a scalpel to reveal the decorative scheme below. This allows investigation of surface patterns that may be missed when analysing a paint sample and by physically revealing the historic surface allows colours to be accurately quantified.

Paint sampling involves removing a sample from the wall to include the paint and substrate. The samples, including substrate, are mounted in polyester resin in cross-section and polished back to reveal the full stratigraphy of the paint layers applied to the building's interior throughout

its history. The earliest paint layers appear at the bottom of the sample, with subsequent layers stacked above, as they would have been applied in real time.

The sample is then viewed through a microscope at various magnifications under simulated daylight to determine the distinct layers of paint applied and to reveal colours. The presence of dirt layers helps to determine the separate decorative schemes – a scheme can be made up of more than one layer, commonly a primer and topcoat or historically even three or four layers.

Ultra-violet illumination causes different types of paint and varnishes to fluoresce in a characteristic manner, helping to distinguish traditional oil paints (both lead and zinc based) from modern synthetic alkyds, distempers and varnish coatings.

HOW TO READ THIS REPORT:

The architectural paint research findings are presented in three formats;

1: Scheme charts 2: Annotated photomicrographs 3: Discussion

SCHEME CHARTS are a chart-based representation of the paint samples as seen in cross section. Each **column** represents a **paint sample**, and each **row** within the column represents a **layer of paint** or for ease a single scheme, in that sample. The far left-hand side column indicates the **decorative scheme** that the layer corresponds to. The **substrate** is simply

whatever base the paint is applied to, e.g. wood or plaster. Scheme charts are not always included unless there is a complex history to illustrate.

A decorative scheme represents each time a room or building was either fully or part redecorated, and represents a snapshot in history. This transcends across multiple charts – e.g. Scheme 5 universally represents the redecoration that occurred in 1803 regardless of location. Thus, in every scheme chart in the report, each scheme will correspond unless otherwise stated. There are often multiple layers to a scheme. For instance, if a wall was being decorated, the decorator may have applied a layer of paint as a primer, and then a layer of cream paint to act as the final colour of the walls, a second coat to give an even finish, and a layer of varnish to protect the paint. Thus, this one scheme of decoration would have four layers.

Alternatively, if a room was redecorated, an area within that interior may have been left unpainted and thus straddle two schemes. For instance, a wall may be cream but have gilded details. A decorator may re-paint the cream areas to freshen the room, but paint around the more expensive gilded areas.

Thus, a paint sample from the cream area would show, say, five layers of paint, whereas the paint sample from the gilded area would only show four

layers. However, the entire room has had two decorative schemes (the original design, and the re-decoration).

This accumulation of paint layers and schemes creates common patterns. Patterns that re-occur across many samples can be matched and aligned. This allows us to see the colour that each area was painted at a specific time, therefore building a picture of what the entire room looked like at each [scheme](#).

For instance, in the Chart, Room 1 originally had gold and cream walls, black skirting and a blue ceiling (scheme 1), however it was then redecorated (scheme 2) to have cream and gold walls, cream ceiling and cream skirting.

	ROOM 1			
	WALL 1	WALL 2	SKIRTING	CEILING
SCHEME 2	Scheme retained	Cream lead oilpaint	Cream lead oilpaint	Cream lead oilpaint
SCHEME 1	Varnish	Varnish	Varnish	
	Gilding	Cream lead oilpaint topcoat		
	Primer / basecoat	Cream lead oilpaint undercoat	Black lead oilpaint	Blue oilpaint
SUBSTRATE	Plaster	Primer	Red lead primer	Primer
		Plaster	Wood	Plaster

TERMINOLOGY:

Paint samples

A physical sample removed from a surface, ideally to include all paint layers and substrate. Similar in process to a medical biopsy. Though collected on site, investigation of paint samples commonly occurs off site in our laboratory. Samples are mounted in blocks of resin, and viewed in cross-section under the microscope to determine the build-up of paint layers. However, as only a small section is analysed, it can often miss patterning or polychrome schemes if examined in isolation.

Numbering & Naming Convention

A number of samples are mounted within a resin block (typically, about eight to ten). The blocks are numbered in sequence, starting at 1, with the individual samples as a sub-section of the block. For example, a sample numbered “2.7” corresponds to block number 2, sample 7. This convention is reflected consistently throughout the report and summarised in the **Sample Location List** (along with a descriptor), for example as

2.7: Chancel Column Capital waterleaf moulding

Paint scrapes/uncovering

The in-situ removal of layers of paint from a surface. This is achieved through either mechanical (e.g. scalpel) or chemical means. It is used to reveal patterns and polychrome schemes that may be missed by single-point paint sampling. A particular layer

may be also targeted in order to obtain a colour reference. Although build-up of layers can be identified using this method, the difficulty of distinguishing between layers without high magnification means that the use of paint scrapes in isolation risks inaccurate and incomplete results. Also known as: *matrix uncovering, laddering, cratering*.

Cross-section

A removed sample made by cuts through the painted surfaces perpendicular to the lay of the paint layers. This enables us to view the build-up of layers.

Photomicrograph

A photo taken through the microscope recording the viewed image.

Paint Layer

A single application of paint

(Decorative) Scheme

The applications of paint, wallpaper, gilding or varnish with the aim of refreshing or redecorating a surface or area. A decorative scheme may be formed from a single layer of paint etc. or from a

set of layers. For instance, four layers: a primer, basecoat, topcoat and varnish, may be constitute a single decorative scheme.

Substrate

The underlying material that the paint (or wallpaper etc.) is applied to, for instance the plaster on a wall, or the wood of a skirting board. It is important to obtain a paint sample complete with the substrate in order to determine if the earliest layer of paint is the earliest decorative scheme. Damage to the substrate, or traces of another paint would indicate that the surface was stripped and so the earliest evidential paint layer is not the first that was applied. Similarly, dirt on the surface of the substrate may indicate that it was original left unpainted.

Primer

A substance used as a preparatory coat on wood, metal, or canvas, especially to prevent the absorption of subsequent layers of paint or the development of corrosion.

Sealing coat / builders or foundry finish

A size, distemper paint or other substance applied to a surface – lime, timber or metal as preparation for the first decorative scheme of paint. A builder's finish was often applied whilst the slow drying lime plaster cured – a process that could take up to a year.

However, this was often deemed to be part of the plasterer's work and not necessarily as a decorative scheme.

Top-coat

The final paint layer applied in the desired final colour or finish.

Varnish

Resin dissolved in a liquid for applying on wood, metal, or other materials to form a hard, clear, shiny surface when dry. Commonly used to protect a surface and improve its longevity, and provide a washable surface. The appearance of a varnish layer may indicate a special, complex or expensive decorative scheme, e.g. polychrome design, gilding, wood-graining etc.

Dirt Layer

After decoration and throughout the lifetime of a decorative scheme, dirt, dust, debris and other particulates become deposited on the surface of the paint. When a new decorative scheme is applied, this build-up of deposits becomes sandwiched between the old and new layers and is visible under the microscope. Taking into account environmental factors, the size of the dirt layer corresponds to the length of time the paint layer it sits on was exposed to the air for.

Thus, the heavier the dirt layer, the longer amount of time between decorative schemes. The lack off a layer of dirt deposits between two paint layers indicates that those paints were applied as part of the same decorative scheme e.g. the application of a basecoat and a topcoat.

Paint

Paint is commonly made from four components: pigment for colour, binder to hold everything together, dryer to enable the drying or curing of the binder and an extender to bulk out the paint and require less pigment.

Oilpaint

Paint made with a drying oil binder, e.g. linseed oil.

Alkyd paint uses a synthetic alkyd resin as a binder. Although available for retail in the UK in 1929, disruption to production due to WWII and a distrust of new paint technologies meant that alkyd paint for decorative purposes was not in common use until at least 1949.

Zinc paint uses zinc compounds to aid drying of the oil. Zinc paints for interior use were originally developed in the 1840's by a Frenchman, E. J. Leclaire, obtaining an American Patent in 1850, though patents for lead paint were to granted in 1846 and 1849. The

use of zinc in paint was revered for its ability to resist discolouration when exposed to sulphur gasses, a problem that occurred in lead-based oil paints, particularly lead white. Commercial production was underway by the second half of the 19th century.¹

Titanium dioxide paint uses titanium dioxide to give a more brilliant, stable and opaque white when compared to lead or zinc. Although discovered in 1821, it was popularised and became the basis most white house paints from 1921 onwards.

Lead paint uses lead compounds to aid the drying of the oil. Lead in linseed oil was the predominate paint base until a rapid decline the 20th century due to increasing concern over its toxicity. White lead in paints fell during 1900-45 from nearly 100% to less than 10%.

Distemper paint

Soft distemper is a permeable paint where the binder is an animal glue. Commonly used with large quantities of whiting (chalk dust) as an extender, optionally with pigments added to provide colour. Distempers are water soluble and usually, but not always, washed off before the application of a new scheme.



Oil bound distemper popularised in the 19th century, a distemper paint with the addition of oil with an emulsifier such as borax

(sodium borate). Unlike soft distempers it is more durable and often washable.





HISTORY OF 3 LYNDHURST TERRACE:

Figure 1: STREET FAÇADE OF NOS 1-3 LYNDHURST TERRACE



Historic England listing details (Listing NGR: TQ2665485264)

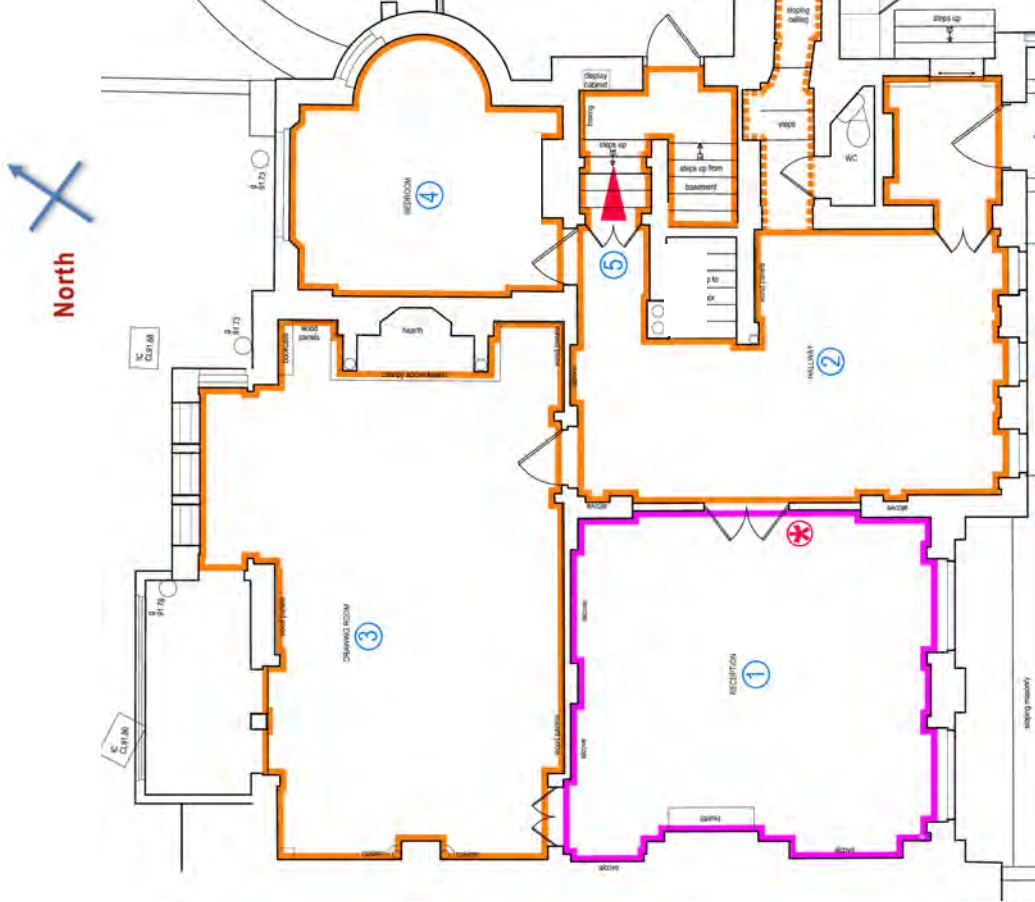
TQ2665SE LYNDHURST TERRACE 798-1/38/1093 (West side) 30/09/83 Nos.1 And 3 and attached boundary walls

11"

Pair of semi-detached houses. c1864-5. By John Burlison, aided by Alfred Bell of Clayton and Bell, both stained-glass manufacturers, for themselves; 1868 converted to one house and interior Gothicised by Bell and Charles Buckridge; c1895 divided again. Yellow stock brick with red and white brick dressings, bands and diaper decoration. Slated roofs with dormers and tall brick slab chimney-stacks. Gothic style. EXTERIOR: 2 and 3 storeys with attics and basement. Main front: irregular with 4-window centre (roof altered to make additional attic storey) flanked by projecting gabled wings, 3-lights to left, 2 to right wing with lower lean-to storey, behind which there is a 2-light gable with chimney and rising roof. Left hand wing has 3-light 2-storey bay, with arcaded brick balustrade, linking it to rectangular tower at angle with pyramidal roof and corbelled oriel window on return. Most windows are lancets, where multiple lights, with colonnettes having carved capitals. Ground floor arcaded, forming porches at angles. Left hand return has circular tower with lancets and conical roof; to left, a chimney breast rising through full height. Rear, elevation with wide half-hipped bay having a large projecting canted ground floor bay with arcaded brick balustrade to provide a balcony. INTERIOR: not inspected but noted that surviving interior decoration is of fine quality, including fireplaces, stained glass and a good surviving scheme of painted wall decoration.

SUBSIDIARY FEATURES: attached polychrome brick patterned walls having gabled pointed arch gateways and small arcaded openings; on left hand return to Lyndhurst Road, wall is buttressed and stepped with a round-arched entrance. Leading from gateway to porch of No.1, an inner wall with grouped arcaded openings. HISTORICAL NOTE: Burlison was Bell's father-in-law and, as first built, the house contained residences for both families with an internal door between. Burlison died in 1868 and Bell's family took over the whole building naming it Bayford House. Bell then employed Buckridge to help produce a wildly ornamented interior. After Bell's death in 1895 the house was divided again.

Figure 2: Floor plan showing location of the interiors affected by fire
Red 'Star' identifies the location of the fire



RESEARCH FINDINGS ROOM 1, RECEPTION:

Scheme chart recording the decorative history surviving in Room 1, Reception

Element/Area		Ceiling rose	Ceiling bed representative	Mouldings above large cove	Large decorative cove	Mouldings below large cove	Main wall face areas	Wall face recess arch	Window and door joinery	Large arch to Hallway intrados	Large arch to Hallway representative				
Scheme No & details.															
Scheme 9. Circa 2010 with post fire survivals extant 2020	Dark red alkyd paint	Dark Purple/Red alkyd	Original scheme with later varnish retained	Original scheme with later varnish retained	Modern red silk hangings	Original scheme with later varnish retained	Modern red silk hangings	Modern red silk hangings	Original scheme with varnishes and waxes applied	Obscured by infill and modern red silk hangings	Obscured by infill and modern red silk hangings				
Scheme 8 Later C20th after modern gypsum plaster skim	Dusky pink alkyd paint	Pale pink alkyd					Cream alkyd paint	Cream alkyd paint							
Scheme 7. Based on post 1950 paint types	Off white alkyd paint	Mid brown alkyd	Gypsum plaster skim				Gypsum plaster skim	Red alkyd paint with varnish over				Red alkyd paint with varnish over	Dark brown alkyd paint retouching	Orange/cream lead oil paint	Stone colour alkyd paint
Scheme 6	Plaster of Paris	Gypsum plaster	Peach colour lead oil paint				Peach colour lead oil paint	Dark brown lead oil paint				Peach colour lead oil paint	Cream and white lead oil paint and 'gold' paint	Stone colour lead oil paint	
Scheme 5 c.1920? Based on use of early C20th zinc paints	No evidence for earlier or original ceiling bed or ceiling rose	Original scheme retained and additional varnish applied	Dark brown lead oil paint	Dark brown lead oil paint	Original scheme retained with varnish coats and wax traces	Pale stone zinc oil paint	Stone colours zinc paint with stencil designs								
Scheme 4 Possibly after the 1895 division into two properties?			Wallpapers, since removed	Wallpapers, since removed				Pale cream lead oil paint	Pale stone colour lead oil paint with stencil retained						
Schemes 2 & 3 As recorded in the 1880 photograph			Original scheme retained	Original scheme retained				Original scheme retained	Original scheme retained	Original scheme retained	Original scheme retained				
Earliest true oil paint scheme later 1860s. Only possible after lime curing completed	Dark cream and brown design with varnish over	Decorative design of Musical Muses with oil gilding	Dark cream and brown design with varnish over	Pale green lead oil paint stencils with wallpapers	Pale green lead oil paint stencils with wallpapers	Dark stain with varnish applied over	Pale stone coloured lead oil paint	Mid stone coloured lead oil paint with stencil designs							
Substrate With builders' finish, allows curing and drying of lime plasters	Lime plaster with traces of the distemper builders' finish	Lime plaster with traces of the distemper builders' finish	Lime plaster with traces of the distemper builders' finish	Lime plaster with traces of the distemper builders' finish	Lime plaster with traces of the distemper builders' finish	Softwood	Stone	Stone							

The scheme chart on the previous page records the currently extant finishes and the identified earlier decorative schemes surviving within Room 1, Reception Room.

In total, 9 schemes have been applied, and it is clearly evidenced that there has been a dramatic move away from the original decorative intention.

There is clear evidence for a typical, traditional, Builder's Finish, directly on the original plaster and then the true first oil paint scheme applied over that. It is this first true scheme, which is recorded in the 1880s image, with stencils, wallpaper, decorative frieze and oil gilded detailing.

This interior survived largely intact, with only minor modernisation until the 1920s and in part also until the 1950s, when post war alkyd paint systems were introduced. The earliest phase retaining stone colours, wallpapers, cream and gold details and stencil designs.

Post 1950 we see block colours to the walls; an initial scheme of red, brown and orange/cream, but with arches and mouldings retained as visible elements.

This continued through the later twentieth century until post 2000, when the fabric draped design obscured and denied the original decorative features.

The covering over of the large arch between the Reception Room and Entrance Hall, was the most dramatic alteration and included the installation of a partition, draped with the fabric, into which it appears the electrical works that are attributed as the source of the fire were inserted.

On-site inspection of the arch reveals a damage surface, much of which can be attributed to the fire starting in that location. Fortunately, much of the profiling and style of the arch survives in reality and record, the earlier and the original stencil designs can be seen with their polychromatic treatment.

The following pages within the report record evidence from the most representative and significant location and elements within the interior.

This format is then repeated for Room 2, Reception Hall and Room 3, Drawing Room.

Figure 3: Room 1, Reception photograph from before the fire



The property owner confirmed that this scheme is approximately 10 years old and included the installation of reclaimed items, such as a pair of double doors fitted to the main arch.

The interior was also lined with modern silk damask hangings on all original wall surfaces and across the arch, which appears to have been keyed in order to take a supporting partition structure.

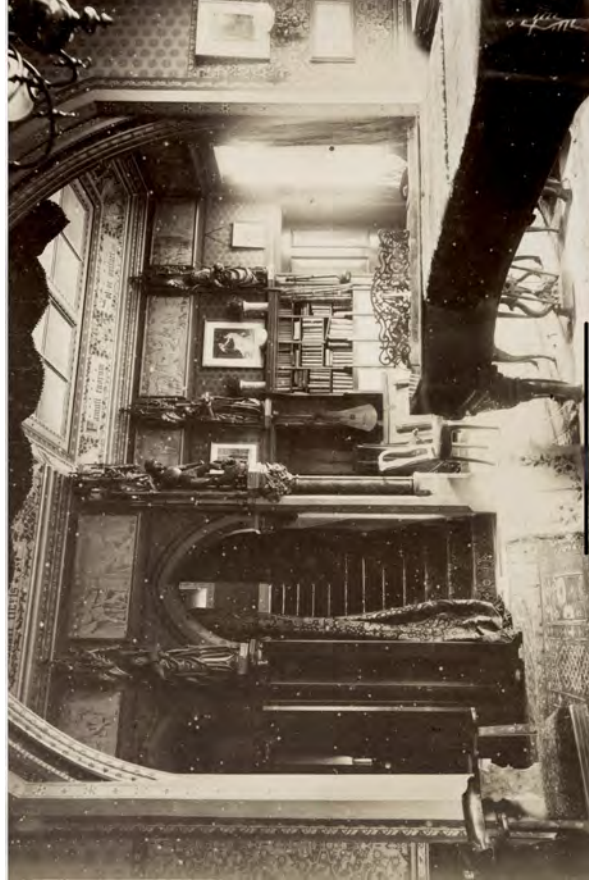
Figure 4: Room 1, Reception after the fire (approximately the same orientation)



This image records the interior as it appeared at the time of this survey.

This coincided with ongoing clearance of the interior by the clients contractor. It is not known if all elements were fully recorded prior to removal. For example, the ceiling, where only fragmentary traces adjacent to the cornice were available for sampling and analysis.

Figure 5: Historic photograph c. 1880, from Reception to the Entrance Hall



The above image records the interior while still under the original family occupancy in 1800. Typical for its date with layer upon layer of furnishings, adornments and finishes, both painted and wallpaper. Many of these architectural details have, over the years, and perhaps more recently, been removed at periods of modernisation and refurbishment.

This report records those elements of original decoration and finish that survive, along with recording the more recent introductions.

Figure 6 shows the interior after the fire, but also records alterations to detailing, for example, the bookcase adornments, overpainted stencil work and general streamlining of the features., which makes a dramatic movement away from the original architectural intentions.

Figure 6: The same view after the fire

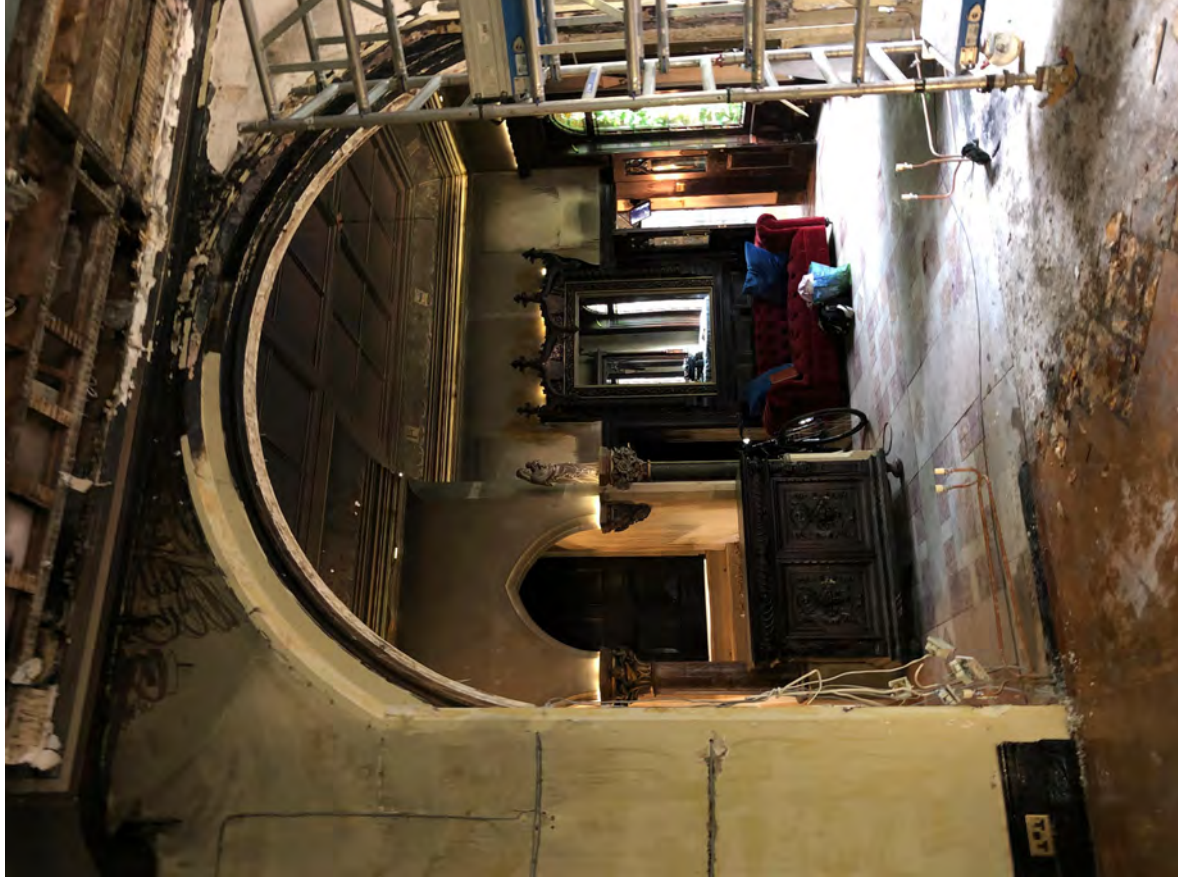
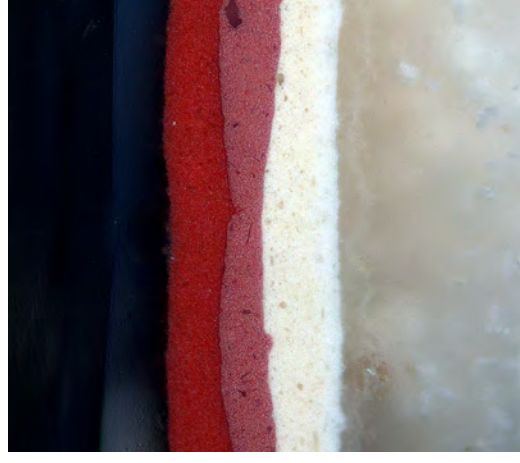


Figure 7: Room 1 Ceiling Rose



Despite its original appearance, the ceiling rose, which analysis has identified is made of a hard casting plaster of a Jesmonite type, appears to be a later twentieth century introduction. This perhaps explains its neoclassical styling of anthemion and foliate scrolls, which depart from the Gothic nature of the property and its interiors.

Figure 8: Sample 1.1 Room 1 Ceiling Rose



The paint schemes on the ceiling rose date from during or after the second half of the twentieth century. The earliest paint scheme, which is in post 1950 alkyd paint, is applied directly to the plaster substrate. This confirms that this element is in reality a relatively modern introduction

The paint layers are here recorded as three separate schemes. However, it is possible that these are only a single finish with high quality preparation coats. The evidence could also suggest a white alkyd primer, dusky pink alkyd undercoat and a dark red alkyd finish coat.

The property owner, who clearly understands the history of the building and its subsequent development, may have knowledge or recollection of the introduction date of this element.

Figure 9: Room 1, surviving fragment of ceiling after the fire



Figure 10: Sample 1.2 Room 1 Ceiling Bed Representative Description of layers:



As recorded previously, the vast majority of ceiling material had been removed prior to our attendance at site. Small areas survived around the perimeter of the bed, adjacent to the upper cornice. While these can be accepted as representative, the will not record and features which may have been sited more centrally.

The ceiling was a modern replacement of gypsum plasterboard, with a series of modern alkyd paint finishes. This indicates a later twentieth century introduction or perhaps even more recently created.

Figure 11: Room 1 Ceiling Cove

With decorative frieze of Musical Muses

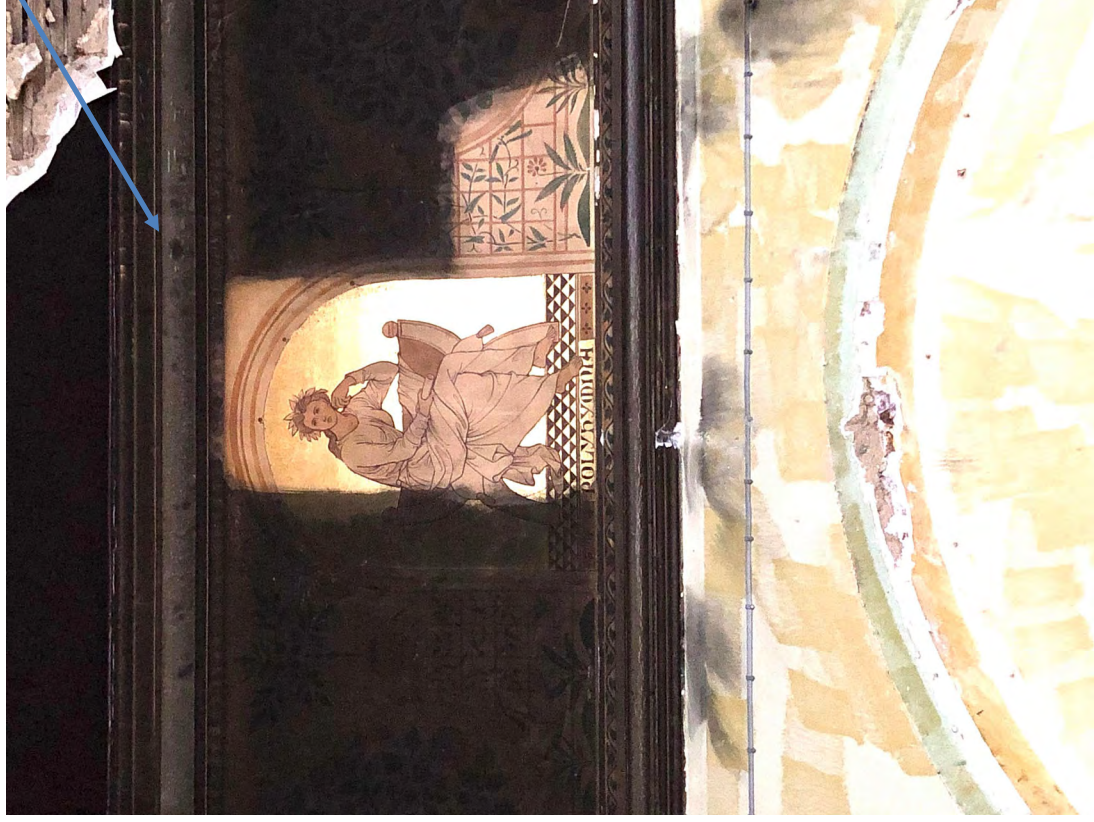
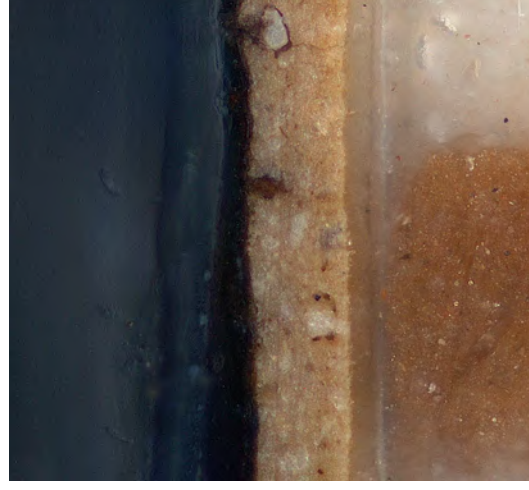


Figure 12: Sample 1.3 Room 1 Large Mouldings Above Ceiling Cove

Description of layers:



Heavy surface deposits of soot and oily residues as a result of the fire over a varnish coat which appears to be original

Original dark cream and brown lead oil paints

Builder's Finish of soft distemper

(applied as a temporary finish when 1st built)

Lime plaster

In contrast to the ceiling elements, the cornice, with its high quality, decorative frieze to the cove is an original feature.

The earliest decoration consists of a Builder's Finish, which is necessary when painting alkaline (plaster-based) surfaces. It consists of a water based soft distemper, applied thinly, which was then washed off once the plaster had carbonised from the atmosphere. No longer being alkaline the surface can take oil based finishes. If applied too soon the oil base saponifies (turns to soap) under the alkaline condition and fails.

The frieze has an original varnish coat which has assisted its survival and large areas will clean readily. Unfortunately, areas directly above the site of the fire require more detailed and careful conservation and reinstatement. (covered in detail later in this report).

Figure 13: Room 1 Large Musical Muses Cove

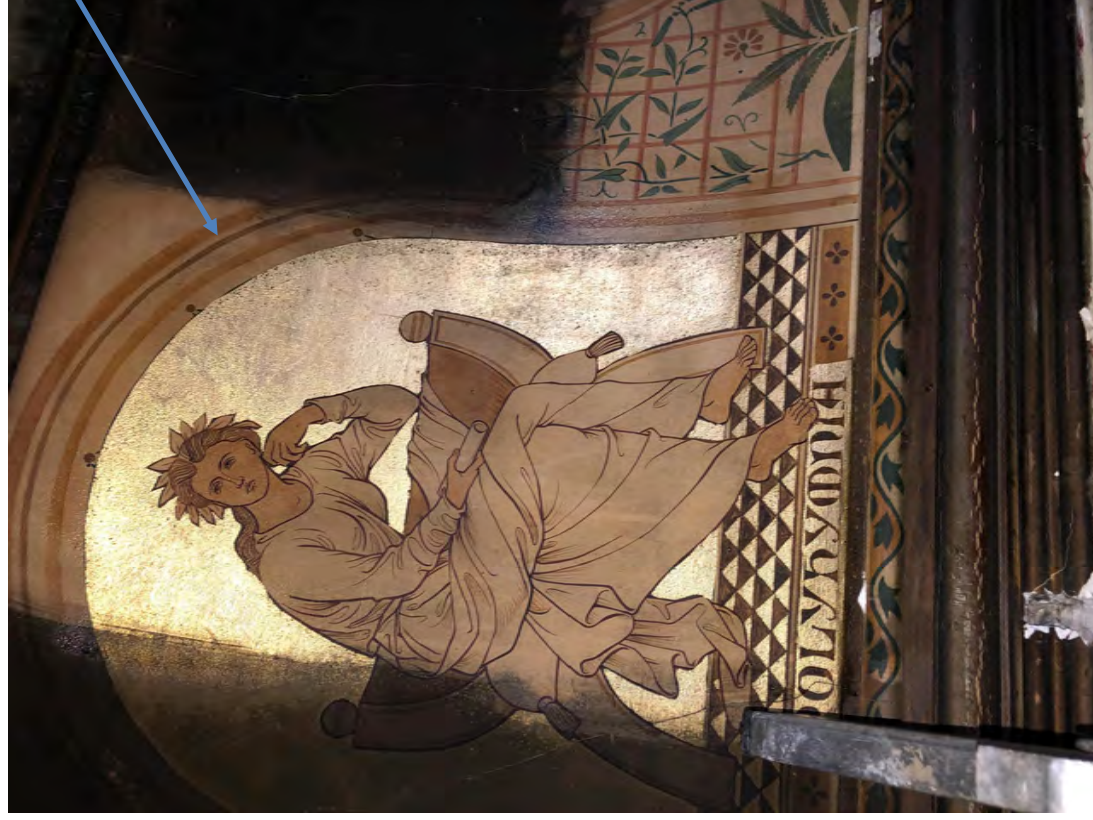


Figure 14: Sample 1.4 Room 1 Large Musical Muses Decorative Cove



Description of layers:

Heavy surface deposits of soot and oily residues as a result of the fire over a varnish coat which appears to be original

Decorative of Muses in lead oil paints with oil gilding as a base and paint applied over

Oil gilding

Lime plaster

As identified with the upper cornice mouldings, the cove frieze is also part of the same original scheme, which includes a varnish coat.

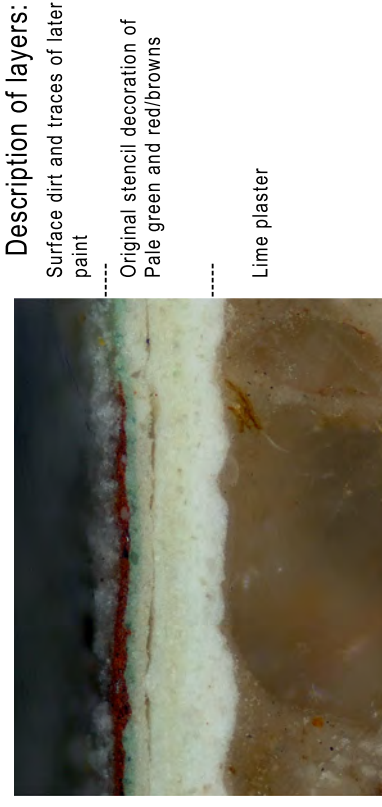
The cross-section above shows the sooty deposits on the surface and the adjacent images, shows how readily this can be removed from most areas.

The cornice frieze and its associated upper and lower mouldings all retain original decoration. The obvious exception being the plaster conduit, which holds the LED illumination strips at the cornice lower edge. These are not included within this report.

Figure 15: Room 1 Main Wall Faces



Figure 16: Sample 2.6 Room 1 Main Wall Face Areas



It is with respect to wall face treatments that the interior has moved furthest away from the original intention. By consequence losing original decorative stencil and border details, beneath later paint schemes and then obscured totally by the modern silk hangings.

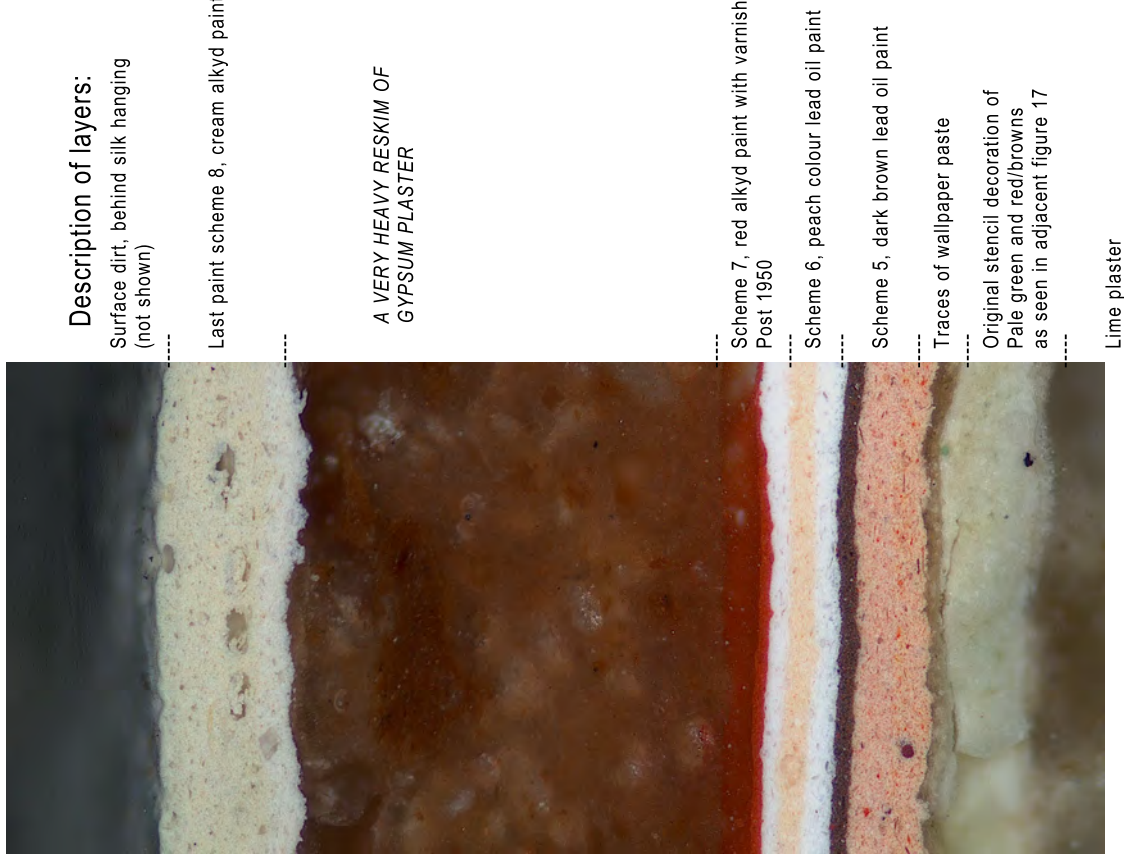
The cross-section recorded above shown the off white base coats for the stencil, the green finish coat and the red decorative work.

These stencils are visible onsite and are also clearly recorded in the 1880s photograph.

Figure 17: Room 1 Wall Face Recess Arch



Figure 18: Sample 2.10 Room 1 Wall Face Recess Arch (incl. layers above the stencil)



See scheme chart for full record

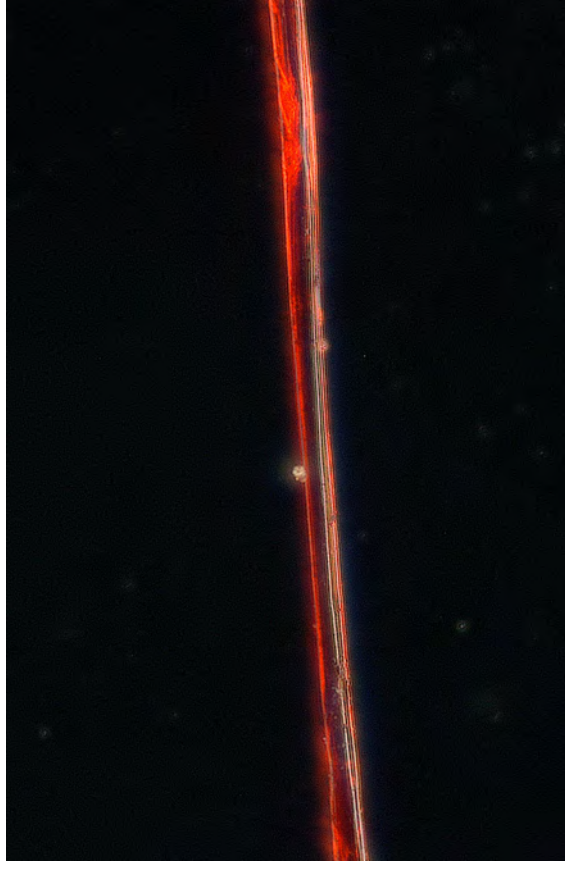
Figure 19: Room 1 Showing Silk Damask Hangings Before the Fire



This image prior to the fire shows the whole interior lined with modern silk, with no respect for the original and surviving architectural detailing of the interior. Even the characteristic wide arch the unifies the two interiors is hidden behind silk drapes.

Figure 20: 2.6 Room 1 Red Silk Damask Hangings

Photograph of a single strand through the microscope at x200 magn.



The smooth extruded nature of the silk fibre is caused by its extrusion from the body of the silkworm to form a cocoon.

The analysis has identified the fabric as a modern silk damask; confirming the statement from the property owner that this was part of a major remodelling and restyling of the interior at that time. It is only 10 years old.

Figure 21: Room 1 Large Arch to Hallway,



Figure 22: Sample 2.12 Room 1 Large Arch to Hallway Intrados



Description of layers:

Surface dirt, behind silk hanging

Last paint scheme 8, cream alkyd paint

Scheme 7, orange cream lead oil paint

Scheme 6, yellow cream colour lead oil paint with bronze based 'gold' paint

Scheme 5, pale stone zinc oil paint

Scheme 4 heavily disrupted scheme of pale cream stone colour oil paints

-----no schemes 2 & 3, scheme 1 retained

Scheme 1, original decoration
Pale stone coloured lead oil paints

Lime plaster

Figure 23: Window joinery showing the retouched original scheme beneath a degraded later acrylic varnish



Figure 24: On closer inspection the acrylic varnish can be seen to have bubbled and readily peels away from the paint surface beneath



Figure 25: The window shutters are modern replacements in a style loosely associated with the original



Figure 26: The timber base of the shutters is of modern softwood, thickly coated with a dark varnish to loosely imitate the original joinery



Figure 27: A scar where a later timber has been removed exposing the original stencil frieze applied to the wall faces



Figure 28: a clearer area of the original frieze with light overpaint



Figure 29: Area of original stencil surviving in the wall face arch recess



Figure 30: Initial test cleaning of the fire and smoke damaged frieze



Figure 31: Frieze sited opposite the source of the fire after initial clean



Figure 32: Detail of plain painted design area after initial clean



Figure 33: frieze area above the source of the fire after initial clean



Figure 34: Detail of frieze showing bubbling to the paint layers and the buckled modern plastic conduits for recent cable installations (not included in this report)



The interior has been severely affected by the fire, particular to the north corner, close to the original source site. This research has been able to identify and record. The decorative history, which is of high importance at a time when the necessarily interventive repair works may necessitate the removal of surfaces and elements.

It must be noted that the interior had largely lost much of its original decoration, through overpainting, replacement of surfaces and the insertion of the partitions and hangings. Yet its most decorative and significant feature, the frieze decoration to the cove; of Musical Muses, executed with an oil gilded base with oil painted decoration has largely survived intact.

Where there is original paintwork and oil gilding, bubbling and buckling has occurred, which has opened up the surfaces. The subsequent sooty and oily deposits of the fire are now sitting on this vulnerable surface.

The most effective cleaning method consisted of the following stages:

1. Record photograph of each area to record current condition
2. Light brushing to remove loose surface deposits (on larger areas thus should be accompanied by vacuuming)
3. Gentle rubbing with 'Smoke Sponges' to lift if more tenacious surface dirt.

4. Gentle cleaning with lint free cotton cloths, using a dilute Synperonic detergent solution in deionised water.
5. Repeat stage 4 using an alkaline soap solution at low percentage strength (5-10%) in deionised water.
6. Cleaning down with pure deionised water to remove and neutralise any surface cleaning product in the surface

Once dry an assessment can be made on the requirement for further surface cleaning, consolidation, filling with inert acrylic filler and the reintroduction of lost details. Where it is not possible to retrieve the original decoration to an aesthetically acceptable level, options for recreation over the original should be considered, in preference to losing the original and recreating from new substrate upwards.

If overlaying a replacement design is decided upon, this should be undertaken to incorporate full reversibility wherever possible. This can be achieved through either an applied surface film in a modern reversible medium, and/or the use of a fine layer of Japanese tissue, applied to the conserved original surface on to which the recreation can be executed.

Both of these options and indeed others should be considered by the conservators undertaking the treatments. Experienced conservators will be required

Keyword's: Integrity, authenticity and reversibility.



RESEARCH FINDINGS ROOM 2, HALLWAY:

Scheme chart recording the decorative history surviving in Room 2, Hallway

Element/Area	Ceiling panel moulding and frame	Mouldings above large cove	Large decorative cove	Mouldings below large cove	Main wall face areas	Dado Treatments	Window and door joinery	Background to wall face arch	Large arch to Room 1
Scheme No & details.									
Scheme 8 Circa 2010 with post fire survivals extant 2020	Scheme 6 retained and current at time of sampling	Scheme 6 retained and current at time of sampling			Off white alkyd paint over fills and repairs	Off white alkyd paint Gothic design MDF Board	Original scheme with varnishes and waxes applied	Off white alkyd paint	Off white alkyd paint
Scheme 7. Based on post 1950 paint types					Beige stone colour alkyd oil paint		Dark brown alkyd retouching	Beige stone colour alkyd oil paint	Beige stone colour alkyd oil paint
Scheme 6	Dark red lead oil paint	Dark red lead oil paint	Original scheme	Original scheme	Dark red lead oil paint			Dark red lead oil paint	Dark red lead oil paint
Scheme 5 c.1920? Based on schemes of white and 'gold' colour paint in association with green	Scheme 3 retained with localised retouching	Scheme 3 retained with localised retouching	retained with very minimal and localised retouching applied	retained with very minimal and localised retouching in a mid-green lead oil paint	Mid green lead oil paint	Onsite investigations identified the dark brown lead oil paint shown in the 1880s photograph.	Original scheme retained with varnish coats and wax traces	White lead oil paint with a 'gold' colour bronze paint design	Mid green lead oil paint
Scheme 4 Possibly after the 1895 division into two properties?					Ochre colour lead oil paint			Surface heavily cleaned back removing traces of earlier schemes.	Ochre colour lead oil paint
Scheme 3 ?	Dark brown lead oil paint with gilding	Dark brown lead oil paint with gilding			Ochre colour lead oil paint	Unfortunately, the modern 'gothic' additions make the detailed investigation impossible.			Ochre colour lead oil paint
Scheme 2 ?	Mid stone colour and polychrome lead oil paint	Mid stone colour and polychrome lead oil paint			Muted ochre lead oil paint				Muted ochre lead oil paint
Earliest true oil paint scheme later 1860s. Only possible after lime curing completed	Mid stone colour lead oil paint	Mid stone colour lead oil paint	Decorative design of music theme (no varnish)	Decorative design in polychrome	Muted ochre lead oil paint		Dark stain with varnish applied over	Assume to be painted in with main wall face?	Muted ochre stone colour lead oil paint
Substrate With builders finish, allows curing and drying of lime plasters	Softwood and lime plaster with traces of distempers	Lime plaster	Lime plaster with traces of distemper	Softwood	Muted ochre stone colour lead oil paint		Softwood	Stone bed	Stone with green distemper traces

Figure 35: Room 2. Entrance Hall as it appeared before the fire



Figure 36: Room 2. Entrance Hall, photograph from 1880

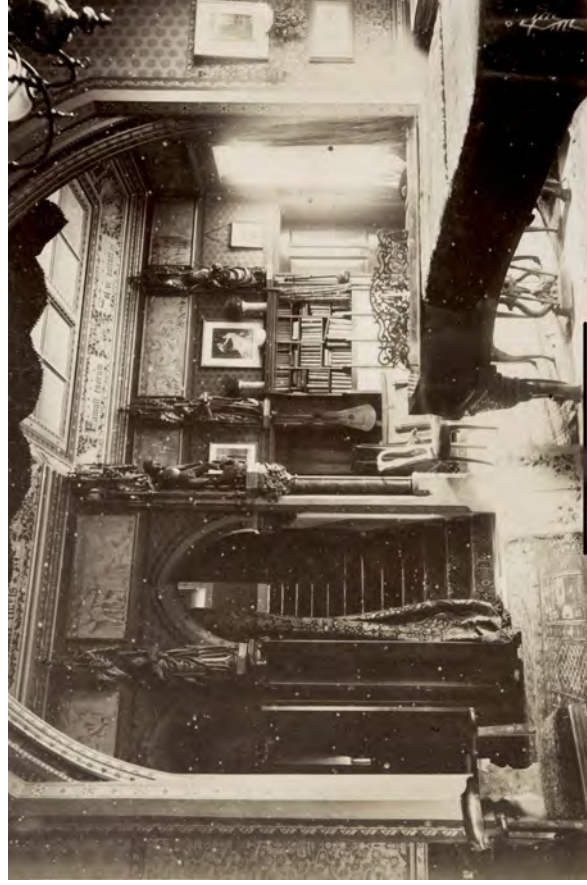


Figure 37: Room 2. Entrance Hall after the fire



These three images confirm the development of this interior in with Room 1, the Reception Room, over time. The scheme chart again documenting the move away from the original intention. There is a close link between these two interiors that continued up to the scheme applied prior to the fire. The design of the silk hanging scheme was the first point at which the areas were separated and defined as two spaces, not a single space.

Figure 38: Room 2. Detail of ceiling panels, frames and mouldings



Figure 39: Room 2. Sample 5.26 ceiling panel mouldings,

Sample shows schemes 1 – 3 only



Description of layers:

Surface soot, dirt and oily residues

Scheme 6, dark red lead oil paint

Scheme 3. Dark brown lead oil paint

Scheme 1, original scheme of mid stone coloured lead oil paint, with later retouching and additions in scheme 2

Softwood substrate, some mouldings are in plaster

The above cross-section and the 1880 photograph in figure 36, both identify that originally the ceiling of the Entrance Hall was a much paler, mid stone colour, than the later red decoration. However, this change to a darker shade was first made at an early date, possibly prior to the separation of the two properties in 1895. The current red scheme is in a mid-twentieth century lead paint system.

Figure 40: Room 2. Ceiling and large cove



Figure 41: Room 2. Sample 5.24 Large cove upper mouldings



Description of layers:

Surface soot, dirt and oily residues

Scheme 6, dark red lead oil paint over bronze based 'gold' paint of the 'gold' mouldings and off white base coats

Scheme 3, brown lead oil paint

Scheme 1, original scheme of mid stone coloured lead oil paint, with later retouching and additions in scheme 2

Plaster substrate, some mouldings are in softwood

These images record both the decorative history and the condition of the cornice and ceiling within the Entrance Hall. The schemes applied appear to be of a significant age, albeit not original. They respond well to cleaning using the methods outlined in this report and require only minimal filling, retouching and stabilisation.

The most complex areas of concern are the decorative frieze element of the large cove, which are detailed on the following pages.

Figure 42: Room 2. Detail of Large Cove Frieze



This image shows test cleans on site and areas of damage, possibly caused by heat expansion caused by the fire. However, cracks in room 3 to the rear of this location, appear to be of some age and have indeed been filled, repaired and repainted. It must be assumed that the two are a result of the same historical cause.

Figure 43: Room 2. Sample 5.23 Large decorative cove



Description of layers:

- Surface soot, dirt and oily residues
- Localise retouching over original Music design
- Scheme 1, original Music themed scheme of polychromatic lead oil paint, with later retouching and additions
- Distemper builder's finish
- Lime plaster substrate,

Test cleaning of the cove frieze and of the decorative panel above the door, proved to be more challenging than the better areas of Room 1. The cove in this interior has not been varnished originally, which has left the surface exposed. In cross-section it is clear that the paint surface has aged more over time than in Room 1, which in turn has created a more open surface.

The surface is also very fragile, vulnerable to wet cleaning and the end result not as dramatic.

Figure 44: Room 2. Detail of interior facing door to Room 3



It is clear that the wall faces of this area have been repeatedly repainted throughout its history, dramatically moving away from the original ochre decoration, through a series of green and then red schemes, before returning to a paler off white stone colour. The wall surfaces clean well and could be readily prepared for a complete redecoration.

Figure 45: Room 2. Sample 4.15, main wall face areas

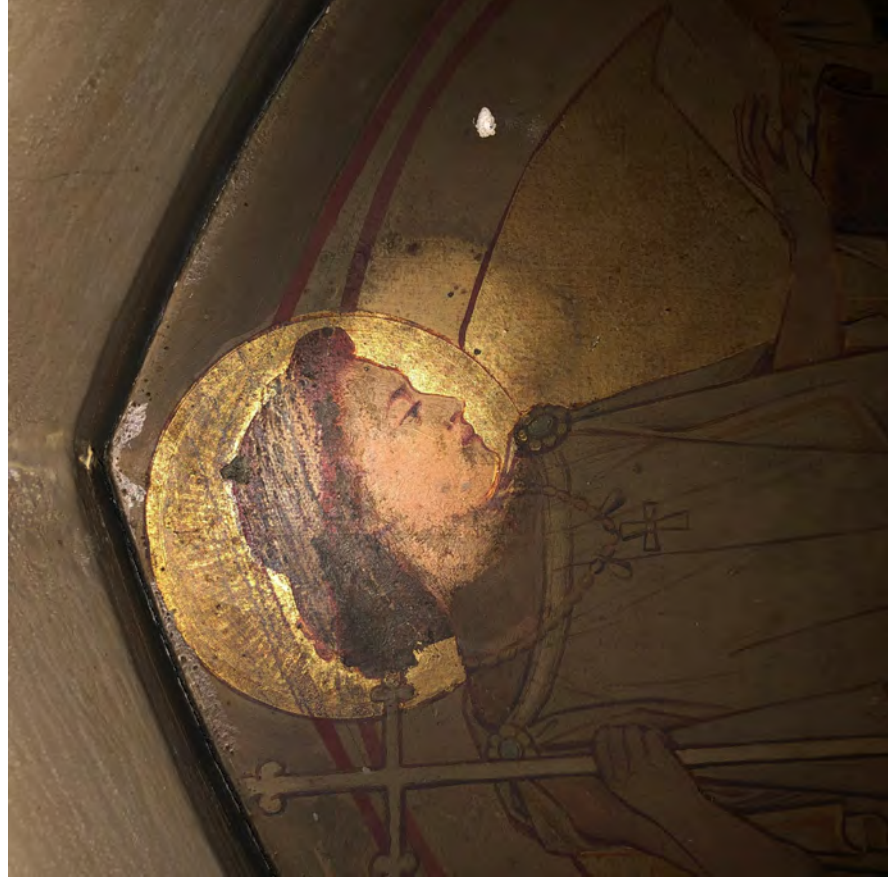
Description of layers:	
	Scheme 8, off white alkyd paint
	Scheme 7, beige stone colour alkyd paint
	Scheme 6. Dark red lead oil paint
	Scheme 5 mid green lead oil paint This scheme has seen the wall faces repainted as intermediate works This has resulted in a mismatch of scheme numbers applied
	Schemes 1 – 4 inclusive. A complex phase of four schemes with intermediate retouching
	Builder's Finish of green distemper
	Lime plaster

Figure 46: Room 2. Cleaning tests on Cove



It was explained previously that unlike Room 1, the decorative cove in Room 2 has not had a surface varnish applied. This has allowed the discolouring and potentially harmful deposits from the fire to adhere more firmly to the painted surfaces

Figure 47: Room 2. Overdoor panel leading to Room 3.



A cleaning trial in a more protected area, shows how the original scheme can be cleaned and retrieved, although this will be a lengthier and more complex exercise that some areas in Room 1.

Figure 48: Room 2. Test clean to main wall face

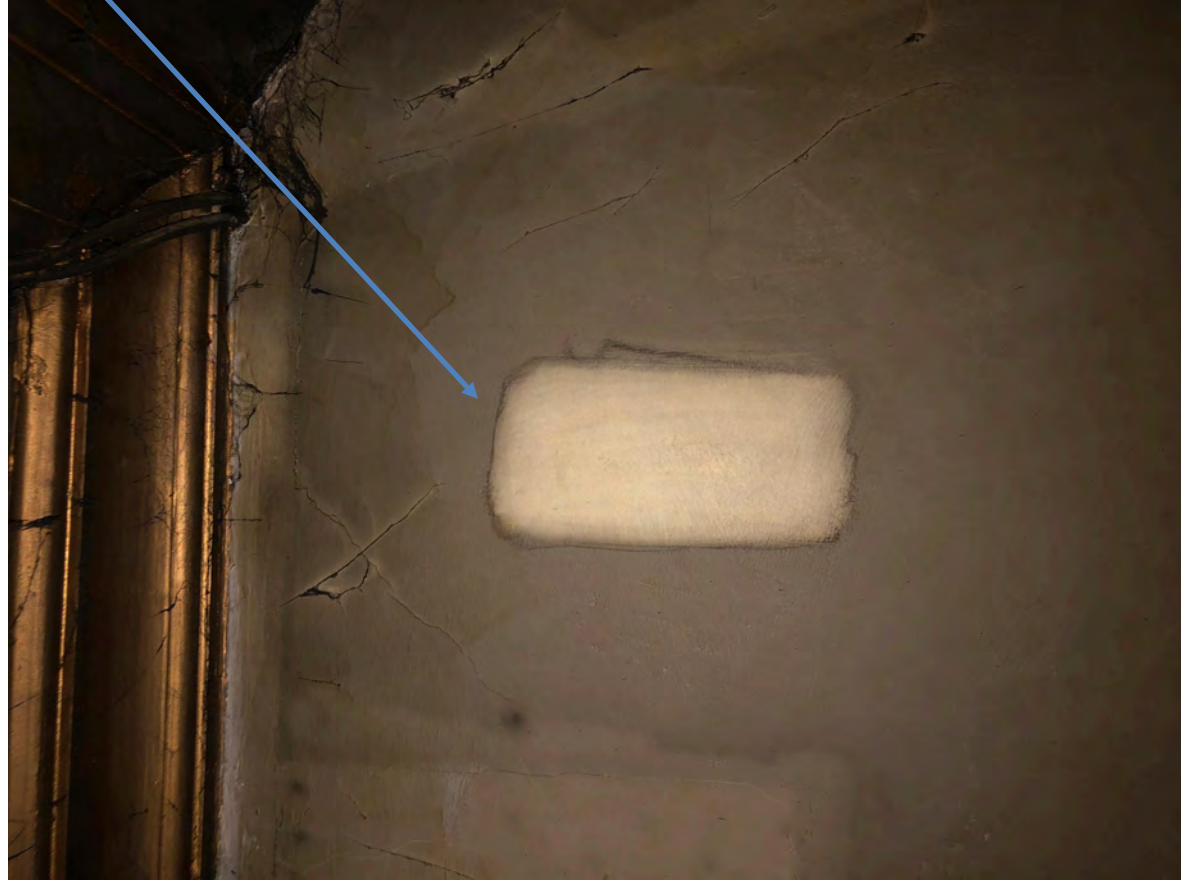


Figure 48 adjacent shows how a very quick and simple test clean removes the dirt from the wall surface. Although it is recommended that the walls be redecorated, it will be necessary to thoroughly clean the surfaces to allow for a required standard of redecoration and avoid staining coming through.

It is recommended that the cleaning method again consists of the following stages:

1. Record photograph of each area to record current condition
2. Light brushing to remove loose surface deposits (on larger areas thus should be accompanied by vacuuming)
3. Gentle rubbing with 'Smoke Sponges' to lift if more tenacious surface dirt.
4. Gentle cleaning with lint free cotton cloths, using a dilute Synperonic detergent solution in deionised water.
5. Repeat stage 4 using an alkaline soap solution at low percentage strength (5-10%) in deionised water.
6. Cleaning down with pure deionised water to remove and neutralise any surface cleaning product in the surface

Once dry the main wall surfaces can then be repainted as necessary.

Figure 49: Room 2. Architectural Gothic detailing of columns and capitals



Figure 50: Room 2. Test clean to painted stone detailing



The column within the interior were not sampled as they appeared to retain original historic finishes in good condition. Instead the research focused on following the same cleaning processes as detailed in room 1 and as seen here proved very effective.

The interior has been less severely affected by the fire, although there are complex cleaning issues here, not encountered in the majority of Room 1. . This research has been able to identify and record. The decorative history , which is of high importance at a time when the necessarily interventive repair works may necessitate the removal of surfaces and elements. It has also identified the close relationship between these two originally unified areas, which was lost by the differentiation of room 1 into a separate space and in particular by the partition within the arch. It is not known how the face of the partition on this side of the arch was treated.

Again, this interior has largely lost much of its original decoration, but as in Room 1, its most decorative and significant features, the frieze decoration to the cove, of Musical Muses, and the overdoor figurative panel have largely survived intact.

Where there is original paintwork and oil gilding, there is less bubbling and buckling has occurred, however, the unvarnished original surface is very open and dried out. The concern primarily is that the sooty and oily deposits of the fire are now sitting on this vulnerable surface.

The most effective cleaning method again consisted of the following stages, which should be tailored by the project conservators for each location and its own unique set of cleaning problems:

1. Record photograph of each area to record current condition
2. Light brushing to remove loose surface deposits (on larger areas thus should be accompanied by vacuuming)
3. Gentle rubbing with 'Smoke Sponges' to lift if more tenacious surface dirt.
4. Gentle cleaning with lint free cotton cloths, using a dilute Synperonic detergent solution in deionised water.
5. Repeat stage 4 using an alkaline soap solution at low percentage strength (5-10%) in deionised water.
6. Cleaning down with pure deionised water to remove and neutralise any surface cleaning product in the surface

Once dry an assessment can be made on the requirement for further surface cleaning, consolidation, filling with inert acrylic filler and the reintroduction of lost details.



RESEARCH FINDINGS ROOM 3, DRAWING ROOM:

Scheme chart recording the decorative history surviving in Room 3, Drawing Room (minimal & representative sampling only)

Element/Area Scheme No & details.	Large cove decorative panels	Ceiling, cornice and beam mouldings	Plaster wall face behind panelling	Wall face decoratively painted panels	Painted arch mouldings	Arch intrados	Silk wall hangings
Scheme 6 Extant 2020					Decorative design in modern alkyd	Decorative design in modern alkyd	Green silk damask
Scheme 5 Based on post 1950 paint types			Dark brown/red alkyd paint		Decorative design in cream alkyd and with bronze based 'gold' colour paint	Decorative design in modern alkyd	
Scheme 4 Mid C20th					Decorative design in white lead oil paint with bronze based 'gold' colour paint	Scheme 3 retained	
Scheme 3	Scheme 2 retained	Scheme 2 retained					
Scheme 2	Decorative and polychromatic paint scheme with a varnish over	Decorative and polychromatic paint scheme with a varnish over		Scheme 1 retained	Scheme 1 retained	Mid stone colour lead oil paint. Possibly with polychrome design	
Earliest true oil paint scheme later 1860s. Only possible after lime curing completed	Pale stone colour lead oil paint	Pale stone colour lead oil paint		Decorative quatrefoil design with gilding and varnish	Pale stone colour with polychrome design in green and oil gilding	Mid stone colour lead oil paint. Possibly with polychrome design	
Substrate With builders finish, allows curing and drying of lime plasters	Plaster with traces of distemper	Plaster with traces of distemper	Lime plaster	Softwood	Stone with surface fill of fine plaster	Stone with surface fill of fine plaster	

The research of the decorative history of this interior again revealed a development and recreation of the paint schemes over time, culminating in more recent redecorations and introductions. This development is again fully recorded in the scheme chart.

There are important survivals of historic scheme that remain exposed, particularly on the ceiling and cornice, and the panels beds set within the frames. The majority of the panel joinery framework appears to be either later or heavily stripped back prior to the current varnish coat. It was noted that certain joinery mouldings appeared to be rotary planed, which would date them as later introductions.

On the following pages questions are posed on the authenticity of many elements within the interior, as moulding jar and misalign. There are also mixes of timber that one wouldn't normally expect. It is possible that the timbers are original and perhaps were originally painted to create a unified scheme. It might be that treatments applied in later redecoration are responsible for the now visible differences.

Room 3, the Drawing Room has fewer complex issues than the previous two interiors. There was no evidence for direct fire damage, heaving or cracking, as where these had occurred they had been repaired and the repairs appeared to be of some age.

The main issues within Room 3 are the light sooty deposits on the painted and varnished surfaces and the removal of the same deposits from the modern silk hangings. These have travelled into the room from the adjacent interior. Mainly as a result of the fire, although there are not protection systems or barriers in place to prevent further dirt. Grit and general detritus from being transferred into this space.

In addition, much of the dirt deposits appear to be of some age. It was noted that there was an accumulation of dirt deposits and discarded items on the top surfaces of the mouldings and detailing, in particular discarded items were seen on the top surface of the enlarged chimneypiece.

Cleaning trials removed surface dirt, but no noticeable brightening of the paint surfaces occurred. The current paint scheme within the interior has a muted finish, whether it be a historic decoration or a more recently repainted surface. This muted appearance could be as a result of many factors.

There are some sooty deposits from the fire. The more recent paint schemes tend towards 'historic paint colours' which tend to muted down to suit modern tastes and perceptions of what historic means. The historic painted surfaces are varnished, which will have darkened and also as they are in a traditional linseed oil base they will darken in an interior situation over time, creating that muted appearance.

Cleaning should again following the same method and guidelines as detailed previously. To refresh, these follow these stages:

1. Record photograph of each area to record current condition
2. Light brushing to remove loose surface deposits (on larger areas thus should be accompanied by vacuuming)
3. Gentle rubbing with 'Smoke Sponges' to lift if more tenacious surface dirt.
4. Gentle cleaning with lint free cotton cloths, using a dilute Synperonic detergent solution in deionised water.
5. Repeat stage 4 using an alkaline soap solution at low percentage strength (5-10%) in deionised water.
6. Cleaning down with pure deionised water to remove and neutralise any surface cleaning product in the surface

Very little redecoration is required, where necessary some minor retouching would be sufficient to refresh the scheme.

The cleaning of the silk hangings is a little more complex. This could be undertaken by textile conservators, or, as it is modern silk then a suitably experienced upholstery cleaning consultancy would be appropriate for its refreshing.

In the first instance the silk would benefit from a vacuuming, with a filter system suited to removing airborne pollutants. Light textile cleaning can then be undertaken.

While surveying the interior it was noted that the edges of the silk hangings would benefit from a more secure fixing method, that would cause less stress to the fabric by applying even support throughout the material. In particular fixing to the edges has excess material tucked away from behind the adjacent panels and architraves. The removal of this unnecessary excess would assist airflow and benefit both the fabric and the adjacent joinery. It would also make more regular housekeeping an easier process.

Figure 51: Room 3. Drawing Room, as it appeared before the fire



Figure 52: Room 3. Drawing Room, as it appears now



Figure 53: Room



Cleaning trials remove surface dirt, which could cross-link to the historic surfaces over time, but visually very little difference results

Figure 54: 7.7 Room 3 Green Silk Damask Hangings

Photograph of a single strand through the microscope at x200 magn.



The smooth extruded nature of the silk fibre is caused by its extrusion from the body of the silkworm to form a cocoon.

The analysis has identified the fabric as a modern silk damask; confirming the statement from the property owner that this was part of a major remodelling and restyling of the properties interior at that time. It is only 10 years old.

Figure 55: Room 3. Drawing Room, detail of ceiling and large cove



Figure 56: Room 3. Sample 6.1. Large Cove Painted Panel



Description of layers:

There is evidence for repair and retouching to the second scheme, where historic settlement has occurred. There are also more recent fitted joinery introductions

Scheme 2, decorative polychromatic lead paint scheme with a varnish applied over

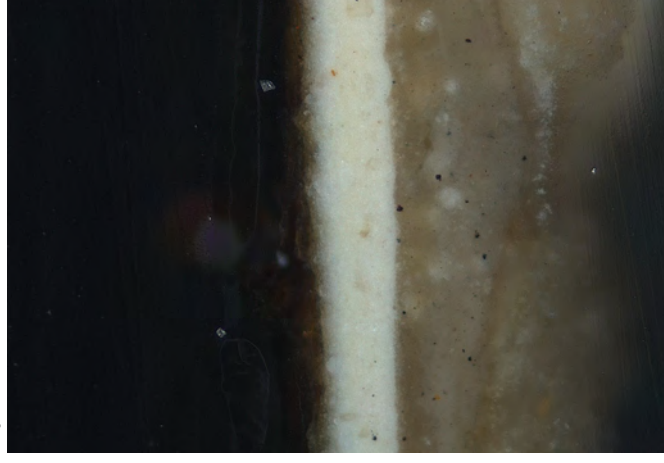
Scheme 1, original scheme of pale stone colour lead oil paint

Plaster

Figure 57:



Figure 58: Room 3. Sample 6.2 Cornice and downstand beams



Description of layers:

There is evidence for repair and retouching to the second scheme, where historic losses has occurred. There are also more recent fitted joinery introductions

Scheme 2, decorative polychromatic lead paint scheme with a varnish applied over (Dark area)

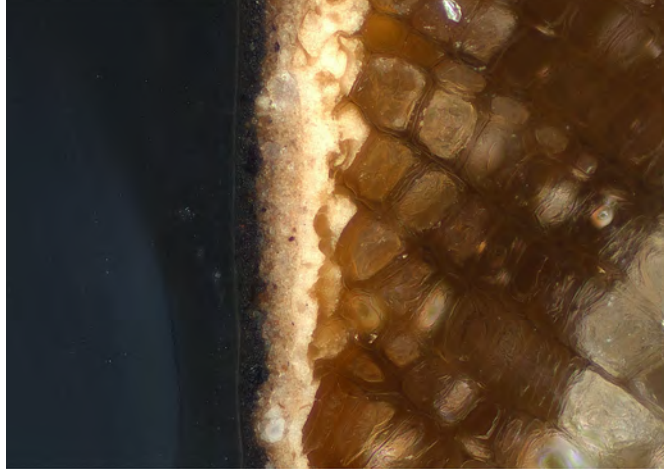
Scheme 1, original scheme of pale stone colour lead oil paint

Plaster

Figure 59:



Figure 60: Room 3. Sample 6.3 Wall Panelling, Panel Bed



Description of layers:

There is evidence for repair and Retouching where historic movement has occurred. There are also more recent fitted joinery introductions

Scheme 1, decorative polychromatic lead paint scheme with a varnish applied over

Softwood

Figure 61: Room 3, Decorated arch. Modern scheme



Figure 62: Room 3. Sample 7.6 Arch Intrados Decorative Designs (representative)



Description of layers:

Scheme 2 - 4,

Later decorative polychromatic
lead and more recent paint scheme
in alkyd and acrylic paints

Scheme 1, original polychrome scheme
in lead oil paints

Limestone

Figure 63: Room 3. Cleaning Trials



Light cleaning following the established method proved beneficial. There are no issues specific to this interior, so this restrained approach will be sufficient.

Figure 64: Room 3, mismatch of timber types and finishes. Also, poorly aligned joints, which suggests a recent reworking.



Figure 65: Room 3, poor alignment of panels and adjacent mouldings which again would suggest a more recent reworking of the interior.



Figure 66: Jarred alignment of the modern cornice to the panels and the historic bookcase.



Figure 67: Current neo-gothic paint scheme in modern materials



Figure 68: Modern 'stone colour' wash over the limestone capitals





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