Head Office
Laughton, Sleaford,
Lincolnshire NG34 0HE

Tel: 01529 497449
hirst@hirst-conservation.com
www.hirst-conservation.com

Title: Validation Survey Part 1

S03 Grand Staircase

Manchester Town Hall

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HIRST Conservation

Manchester Town Hall
S03 Grand Staircase, Validation Survey Part 1

22/06/2022

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1. Scope of validation survey

The intention of the survey is to confirm the scope of works set out in the tender and identify and additional requirements.

Scope of work in accordance with the tender:

> *3.01.01 General Cleaning and Assessment of the painted plaster surfaces:*
>
> *Carry out a general clean to all the existing painted plaster ceiling surfaces above the Grand Staircases. A chemical sponge dampened with de-ionised water will be effective in removing dirt from these areas and they are to be thoroughly dried with cotton wool after treatment.*
>
> *3.01.02 Validation Inspection:*
>
> *The areas of oil alkyd overpaint carried out in the 1990s on the vaulting groins appear from visual inspection to be generally compatible with the original paints (the pattern of which can be discerned below the current layers) as there are no identified condition issues. They have a glossy sheen and in other locations these paints tend to peel in the areas of condition concern due to their surface tension and lack of permeability. Consequently, following the general clean it will be essential that the conservators carry out a full visual inspection of the painted surfaces, prior to the other recommended conservation works on starry night vault groins, to determine any condition issues that have not been foreseen and to validate the scope of any further required action.*
>
> *The extent of any minor defective overpainting to be removed may therefore require further assessment, however, it must be assumed until this has been done that all the areas are sound.*
>
> *A more detailed understanding of the overpaint will inevitably be achieved during the actual works, from increased familiarity of the painted surface and the impact of the general cleaning. All areas that are subsequently identified to be removed should be fully recorded in detail (photographically and with gridded tracings) to enable faithful reinstatement.*
>
> *3.01.03 Cleaning Areas of Stencilled Gilding on the Starry Night:*
>
> *These features can be additionally cleaned with a solution of tri-ammonium citrate (3% in deionised water) applied with cotton swabs, cleared with deionised water, and dried with cotton wool. This process effectively removes the dirt coating on the gilding and greatly improves the reflectance properties. This is considered to be beneficial to all the gilding and is included in the scope required.*
>
> *Any significant losses of gilding are to be in-filled to match with equivalent quality and colour of gold leaf on oil size but as the current gilding is relatively recent it is assumed at present that all the gilding will clean without any loss.*

2. Part 1 assessment of condition

2.1. Method and limitations

Visual assessment undertaken from scaffold platform in advance of main works. Tactile assessment was limited to the lower sections of plasterworks. Inspection was undertaken in visible diffuse and raking light, together with UV light inspection. Each groin was given an individual reference number (Figure 1 and Figure 2).

2.2. Plaster

2.2.1. General

The plaster support appears to be in sound condition. The ceiling has suffered some small losses and areas of water ingress, but these are extremely limited.

2.2.2. Blown/ delaminating plaster

Three areas of blown/ delaminating plaster were noted to the ceilings:

- S16 (Figure 11)
- S17 (Figure 11)
- N4 (Figure 13)

There were all small areas, where localised pockets of plaster were seen to be delaminating and pushing outwards. No loss was noted to these areas.

One small loss appears to have been overpainted on panel S1.

2.2.3. Air gun pellets

A low number of panels were noted to have small, fresh losses which appear to relate to air gun pellets, similar to those found in the Great Hall.

2.3. Paint decoration

2.3.1. General

The decoration dates to the 1990s, and appears to be undertaken in synthetic resin paints. Assessment in UV light indicates that the paint was varnished before the gilded detail was applied, and gold skewings bonded to the varnish (this is not apparent from a distance, but at close range, this had lead to loss of definition on the edges ot the gilded designs). Generally, the painted decoration is very stable.

The varnish has discoloured in areas, creating a patchy appearance to some of the groins, in

2.3.2. Surface lying dust and dirt

There is a thin veil of surface lying accretions, however no imbibed dirt was noted.

2.3.3. Moisture and salt damage

Flaking and loss of decoration appears to be limited to S02, and is limited to the gilded and lined border above the window arch. The plaster substrate is exposed in this area.

2.3.4. Discolouration

Discolouration as noted on several groins, particularly to the south side. Inspection in UV light indicates that this relates to the varnish layer, which was applied before the gilding. The discolouration may relate to the thickness of the varnish in these areas.

2.3.5. Loss of gilding

Comparison of the condition in March and May 2022 indicates that there has been some loss of gilding to the outer band, particularly on the south ceiling. This appears to relate to masking tape or latex poultice used on the stonework.

2.4. Actions

Condition observation	Proposed action	Agreed action
Blown/ delaminating plaster	Option A: Remove failed sections, repair and retouch. Option B: Grout, repair and retouch	TBA
Air gun pellet damage to plaster	Do not fill, retouch to integrate	TBA
Surface lying dust and dirt	The painted decoration will be dry cleaned with soft brushes and vacuum extraction, followed by cleaning with melamine sponged and deionised water. The gilded decoration will additionally be cleaned with 3% TAC, and cleared with deionised water.	Agreed
Moisture and salt damage Flaking and loss of decoration appears to be limited to S02, and is limited to the gilded and lined border above the window arch.	Option 1: Consolidate and retouch Option 2: Remove flaking paints to a sound edge, consolidate the edge and retouch/ gild losses	TBA
Discolouration Discolouration relates to the varnish layer, which was applied before the gilding.	Option 1: No further action. Option 2: Removal of varnish would be highly time consuming to undertake selectively, retaining the gilding. Whole sale varnish removal would lead to loss of gilded decoration.	Propose no action.
Gilding to areas of loss on borders	Option: Allow to gild with colour matched gold leaf minimum 23.5 carat gold on oil size.	TBA and subject to measure.

3. Panel referencing

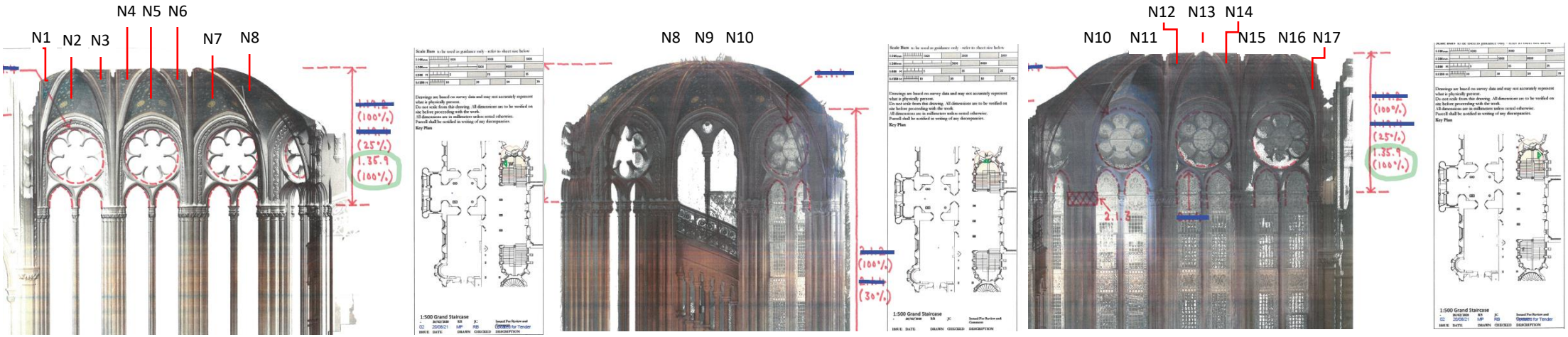


Figure 2: Left, north stairs, west elevation; centre, north stairs, north elevation; right, north stairs, east elevation

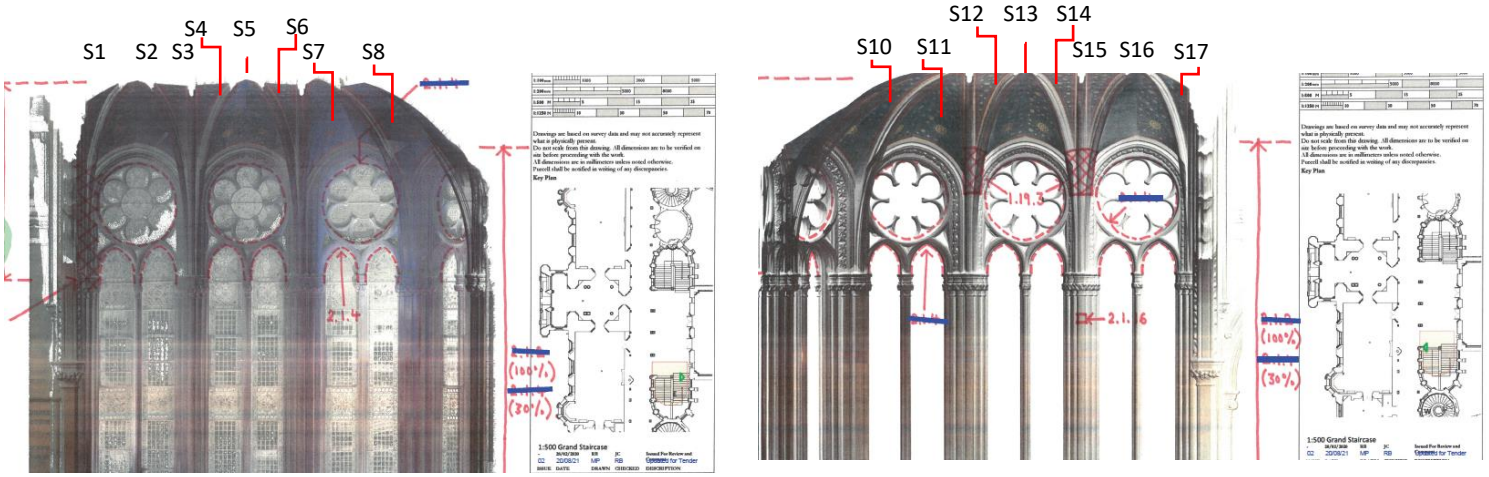


Figure 1: Left, south stairs, west elevation; right, south stairs, east elevation

4. South Side

4.1. S1, S2, , S3



Figure 3: Left, 15th March 2022; Right, 25th May 2022. Inset, flaking and loss to panel S2

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. Some previous losses have been overpainted. These appear to relate to mechanical damage. S02, had area of water/ salt damage directly above window arch. This has not significantly altered between March and May 2022.
Painted decoration	Generally in sound condition. Between March and May 2022, the outer gilded border appears to have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application. S02, had area of water/ salt damage directly above window arch. This has not significantly altered between March and May 2022
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Progress consolidation and retouching to S2
	Review, agree and implement scope of any regilding works agreed

4.2. S4, S5, S6



Figure 4: Left, 15th March 2022; Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition. Between March and May 2022, the outer gilded border appears to have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

4.3. S7



Figure 5: Left, 15th March 2022, Right 25th May 2022. Inset, loss of gilding

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition. Between March and May 2022, the outer gilded border appears to have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

4.4. S8



Figure 6: Left, 15th March 2022; Right 25th May 2022; inset, detail of loss of gilding

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition. Varnish is discoloured, noted as patchy brown appearance. Between March and May 2022, the outer gilded border appears to have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

4.5. S9



Figure 7: Left, 15th March 2022; Right 25th May 2022; inset, detail of possible loss of gilding

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. Some previous losses have been overpainted. These appear to relate to mechanical damage.
Painted decoration	Generally in sound condition. Varnish is discoloured, noted as patchy brown appearance. Between March and May 2022, the outer gilded border may have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application. Further assessment required from access.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

S10



Figure 8: Left, 15th March 2022; Right 25th May 2022; inset, detail of loss of gilding

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. Some previous losses have been overpainted. These appear to relate to mechanical damage.
Painted decoration	Generally in sound condition. Varnish is discoloured, noted as patchy brown appearance. Between March and May 2022, the outer gilded border may have lost gold leaf, exposing the yellow ground. This appears to relate to masking tape/ latex application. Further assessment required from access.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

4.6. S11



Figure 9: Left, 15th March 2022; Right 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition. Between March and May 2022, the outer gilded border appears to have lost gold leaf (very minor), exposing the yellow ground. This appears to relate to masking tape/ latex application.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

4.7. S12-14

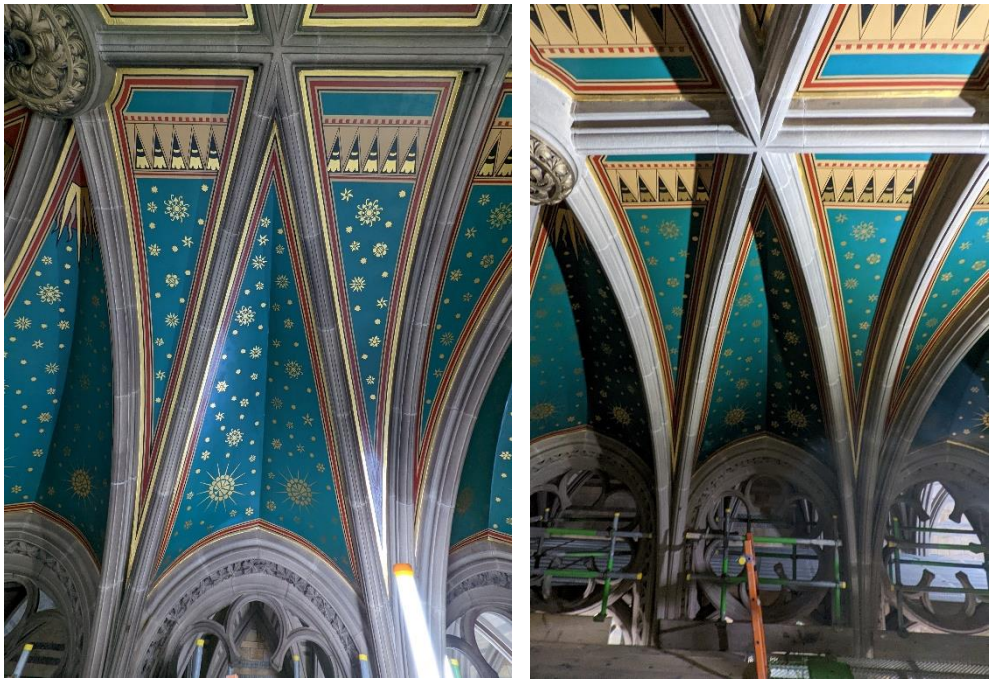


Figure 10: Left, 15th March 2022; Right 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition. Between March and May 2022, the outer gilded border appears to have some very minor losses of gold leaf, exposing the yellow ground. This may relate to masking tape/ latex application.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5. S15-17

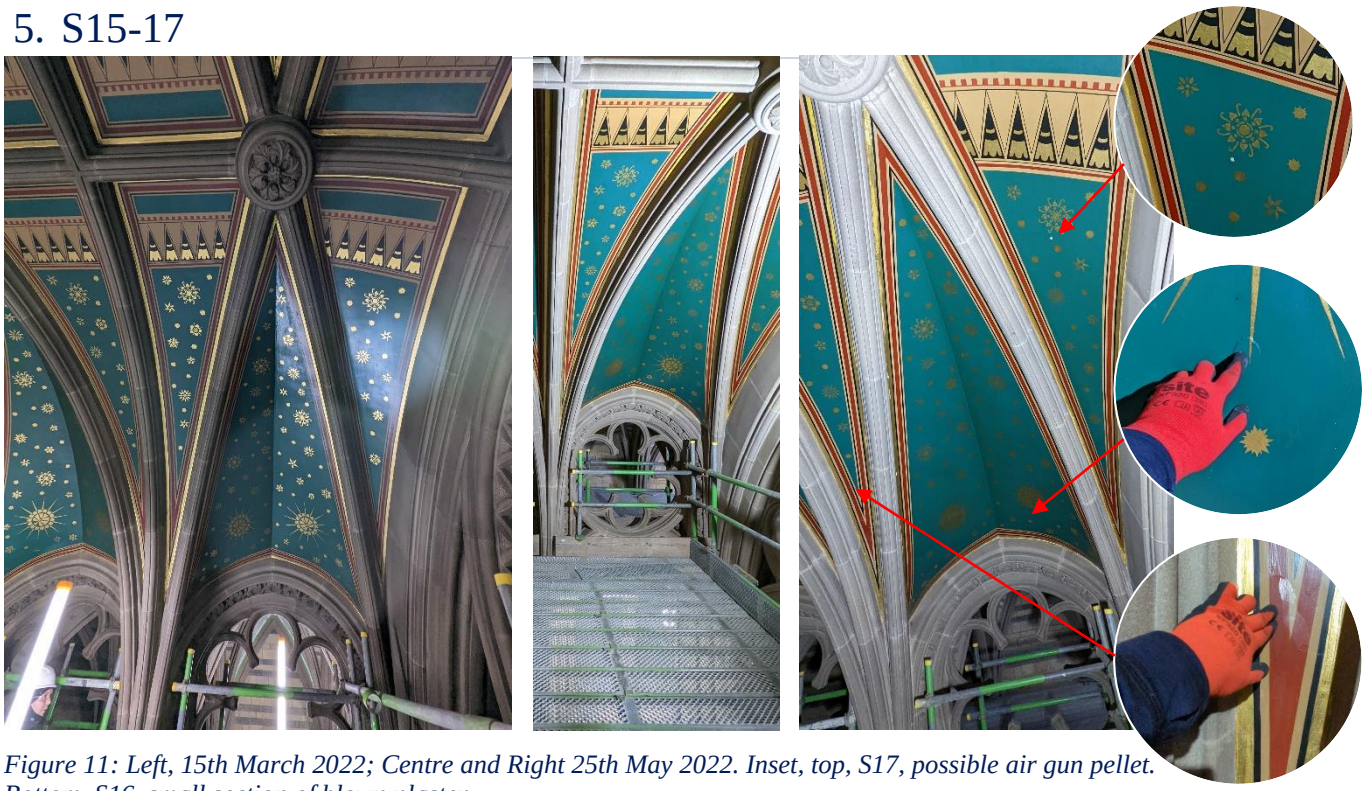


Figure 11: Left, 15th March 2022; Centre and Right 25th May 2022. Inset, top, S17, possible air gun pellet. Bottom, S16, small section of blown plaster.

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. S15 – Lower section blown, detaching plaster exhibiting movement. Area approx. 12cm x 8cm. S16 – one small blown section noted to north face, see inset image. S17 – possible small loss (air gun pellet?) to upper section, see inset image.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Confirm method and undertake stabilisation to S15 and S16
	Review, agree and implement scope of any regilding works agreed

North Side

5.1. N1, N2, N3



Figure 12: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. N3 – impact damage, possible air gun pellet.
Painted decoration	Generally in sound condition. Between March and May 2022, some very minor loss of the outer gilded border to N1.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.3. N3, N4, N5



Figure 13: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound. N5 – impact damage, possible air gun pellet. N4 – Section of blown plaster approx. 8cm diameter.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Confirm method and undertake stabilisation to N4
	Review, agree and implement scope of any regilding works agreed

N7

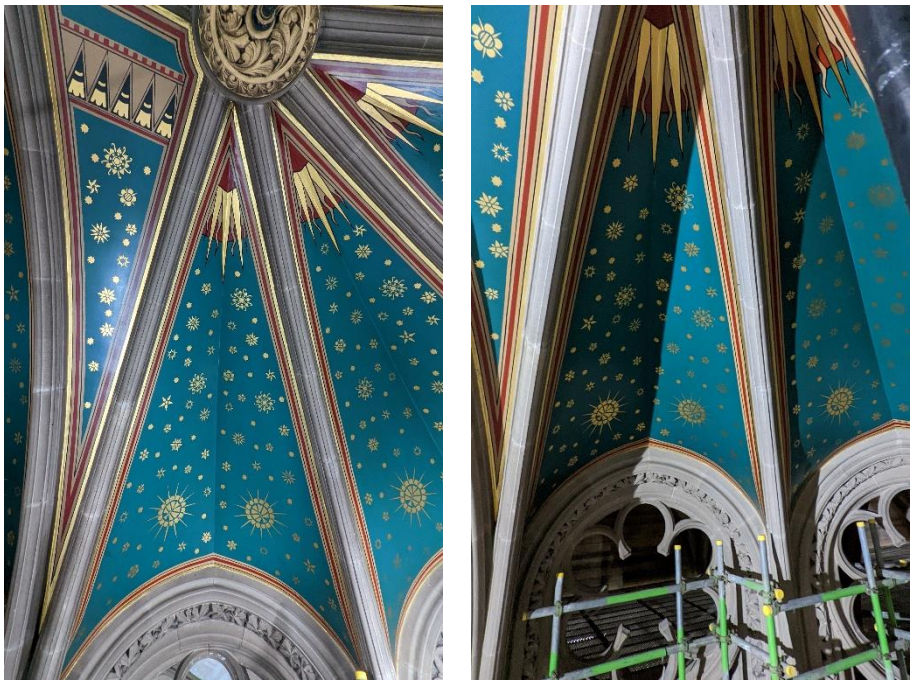


Figure 14: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.4. N8



Figure 15: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.5. N9



Figure 16: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.6. N10



Figure 17: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.7. N11



Figure 18: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.8. N12-14



Figure 19: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed

5.9. N15-17



Figure 20: Left, 15th March 2022; Centre and Right, 25th May 2022

Plaster substrate	Visual assessment from scaffold deck indicates that the plaster is largely sound.
Painted decoration	Generally in sound condition.
Next steps	Undertake tactile survey from Mi-Tower Access
	Review any additional condition points identified in the tactile survey with Purcell and Client
	Progress cleaning
	Review, agree and implement scope of any regilding works agreed



Head Office
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