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Title: Validation Survey

Great Hall

Manchester Town Hall

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HIRST Conservation

Manchester Town Hall
Great Hall, Validation Survey

27/07/2022

Rev 00: For Approval

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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:

1.02 Cleaning

A general approach to the cleaning of the paint surface overall is recommended by Hirst and this will apply to all 28 of the panels as the scope and methodology described below. However, particular characteristics of the paint will demand some variation to this general approach that will be determined by the conservator in carrying out the work. An initial general dry clean with a soft brush and vacuum is required for the whole painted surface, following the necessary preliminary appraisal and recording.

1.02.01 Removal of surface dirt from areas of original paint affected by salts (as on mapping)

The use of dry sponges in initial trials had little visible effect on the removal of dirt or salt and, instead, abraded the paint surface. The original wax media paints were also found to be too sensitive to non-aqueous solvents. All effective cleaning options in the preliminary trials therefore contained water. De-ionised water applied with cotton swabs proved effective in removing dirt and the 'tacky darkened coating', as well as being effective at reducing salt presence, from most of the original blue backgrounds decorated with bees and from the mushroom-coloured paint. However, the use of water-based cleaning treatment can lead to damaging deliquescence and crystallisation of salts on or below the painting surface if they are present. The use of wet cleaning treatments must therefore use the minimal amount of water possible, and the surface must be dried thoroughly after treatment. The treated area in trials was thoroughly dried immediately after treatment using presses of highly absorbent material such as dry cotton wool pads, applied to the surface. The press should be monitored and replaced until all the water is completely dried from the cleaned surface. Such areas should be closely monitored post-treatment for evidence of salt crystallisation before any infilling with paint or the striking of scaffold.

1.02.02 Water sensitive paint

Areas of extreme sensitivity identified in the trials include areas of yellow and red. Some red areas are coated with a water-soluble paint or red pigmented substance which is highly sensitive to water. Limited cleaning trials identified that water solubilised this pigmented layer and where removed, the red paint appeared paler and blanched.
It is therefore recommended that such sensitive passages of paint, and others that may yet be identified during the work, which display similar sensitivity to water, may be cleaned with a soft brush only.

1.02.03 Powdering paint

The powdering to the original paint of the brown outlines found in all the panels will need to be consolidated and reinstated where failure is visible (see section 1.04 below). However, the susceptibility to further deterioration prohibits surface cleaning other than to those areas where powdering will be consolidated. The dark colour of the outlines means that any surface dirt present is not readily apparent, and that no extreme visual imbalance will be created by the presence of surface dirt where these have not yet failed. Where consolidation and in-painting are required these areas will required initial cleaning with the de-ionised water and sponge method.

1.02.03 The '1894 overpaint'

The '1894 overpaint' intervention refers to the first 'restoration' carried out by C.E Greenwood, Tom Ingham and C. Staunton in 1894. The current understanding is that this scheme of restoration encompasses the beige (also referred to in Hirst Conservation, Condition Survey with Preliminary Cleaning Trials and Recommendations for Treatment of the Great Hall Ceiling as 'cream'). This layer of paint is likely to be flat oil based rather than the original wax media used but nevertheless, it seems to be quite compatible with the original both from an aesthetic and technical point of view. It is generally sound and not as sensitive to cleaning as the matt wax media and responds well to tri-ammonium citrate (3% solution in de-ionised water) applied with cotton swabs, cleared with deionised water, and dried with cotton wool, so this method can be used in addition to the standard de-ionised water clean if advantageous.

1.02.04 Modern 'oil-alkyd' overpaint (1950's and 1960's)

In preliminary tests, these areas of oil alkyd overpaint are not generally as compatible with the original paints, as they have a glossy sheen and have a tendency to peel in areas of condition concern as identified as the categories 'flaking' or 'overpaint' and 'overpaint over overpaint' due to their surface tension and lack of permeability. Where they are in areas with no condition issues (i.e., not identified on the mapping categories) they showed no sensitivity to the cleaning methods used. A chemical sponge dampened with de-ionised water was effective in removing dirt from these areas. The areas were thoroughly dried with cotton wool after treatment. Where they are identified on the mapping, the requirement is to remove the whole area shown on the mapping as 'flaking' or 'overpaint' and 'overpaint over overpaint' to mitigate risk of further flaking and reinstate any loss with sensitive in-painting (refer to section 1.04).

1.02.05 Areas of gilding (original and non-original)

A solution of tri-ammonium citrate (3% in deionised water) applied with cotton swabs, cleared with deionised water, and dried with cotton wool removed the surface dirt safely and effectively from the original and non-original gilding. This process effectively removed the dirt coating on the gilding and greatly improved 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 infilled to match with equivalent quality and colour of gold leaf on oil size (refer to section 1.04).

1.03.01 Fractures

There are a significant number of fractures in the finish plaster, but they are all assessed as stable in the Hirst mapping other than those associated with the hollow areas described below. Final assessment of the backing plaster keys will be possible when the backs are cleaned by others. At present there are no areas identified that will require additional structural support due to delamination of the backing coats.

1.03.02 Hollow Plaster

The areas identified as 'hollow plaster' on the mapping are generally minor delamination of the finish coat and these should all be consolidated by injection of lime putty and finest silver sand grout as a void filler and adhesive.

1.03.03 Plaster Loss and Impact Holes

There are many very small plaster losses identified on the mapping, mainly caused by the impact of lead airgun pellets. These are not to be filled as there would be a significant risk of further damage to remove the pellets that are in situ still and a future risk of the fill 'popping' off. The approach to these losses is to clean these voids to remove any loosely bound dirt or debris and retouch the substrate with paint to match the surrounding area directly without filling.
The other areas of minor plaster loss are directly related to the edges of fractures on the boundary of the hollow areas identified in 1.03.02 above and these will be resolved as part of the finishing of

the grouting process. These edges should be finally filled using Toupret® powder combined with de-ionised water to a suitable consistency. Prior to filling, the areas of loss in the plaster are cleaned with a soft brush to remove debris and dust. The area is then dampened to control suction, and the filling material applied. Once dry, the filling is shaped flush with the surrounding paint surface using de-ionised water and cotton swabs.
The in-painting of the resultant bare plaster is to be included under section 1.04.07 below.

1.04 Paint Consolidation

1.04.01 Flaking Paint

The vast majority of areas identified as flaking on the mapping relate to the modern oil-alkyd overpaint. The required approach to these areas (once the detail is recorded) is to remove the flaking areas and the identified extent of affected overpaint (shown as 'overpaint' and 'overpaint on overpaint' areas) which is at risk of further flaking or peeling due to identified deterioration or condition issues. In general, the overpaint removal will also remove the original paint underneath but any areas of original paint exposed will be cleaned and treated as described in section 1.02 above. The resultant edges of any surrounding sound overpaint (not shaded on mapping) should be consolidated (as in section 1.04.02 below) prior to the patches of bare plaster being in-painted as described in section 1.04.07 below. The process of consolidation for these paint edges was established after extensive trials by Hirst and the resultant technique described here should be adopted. A 10% solution of Paraloid B72 in acetone was found to be effective for the consolidation of delaminated original and non-original paint. Excess adhesive could be effectively removed from the paint surface following consolidation using acetone applied with a cotton swab. To stabilise the edges of existing areas of paint loss and areas of less severe cupping in the original and non-original paint, the consolidant was applied behind the flake using a small brush or hypodermic syringe. The paint surface was then protected with silicone release paper and a thermostatically controlled heated spatula set at 70°C used to gently lay flat the lifted paint through the use of heat and pressure.

1.04.02 Powdering Paint

The chosen consolidant is required to be stable, reversible, and slightly weaker than the existing alternative forces within the object to which it is applied.
It is also important that the consolidant does not result in excessive saturation of the paint layers, and that any excess adhesive can be safely cleared from the surface without affecting the paint layers. Pre-treatment tests established the paintings' potential sensitivity to any carrier solvents that may be in a consolidant, and to the solvents required to clear any excess adhesive from the paint surface following consolidation. The passages of original and non-original paint layers that were tested proved stable to the controlled swab application of white spirits, xylene and acetone. It was not feasible, however, to test every passage of original and non-original paint present on the ceiling; it is therefore advised that each paint type to be consolidated is tested for solvent sensitivity prior to treatment as work proceeds.
The painted surface's sensitivity to heat was also tested due to the likely use of a heated spatula and/or hot air pen to consolidate the paint. The heat sensitivity of the original paint layers and various passages of retouching were tested using a thermostatically controlled spatula, with the degree of heat (applied to the paint surface through silicone release paper) gradually increased during testing. The use of heat can be required for the plasticisation of paint layers to lay them flat during the consolidation process. The effects of a hot air pen were also tested. The original and non-original paint proved tolerant to temperatures up 70°C.
The powdering brown outlines of original paint were consolidated using Lascaux 4176 Medium for

Consolidation (1:4 in de-ionised water). Lascaux 4176 is an aqueous dispersion of an acrylic copolymer,
which dries to a clear and flexible film, and is light resistant and does not yellow with age. It can be thinned with water but can be used at much greater concentrations than other consolidants without causing shiny surface residue or darkening. It has a very low viscosity, so it has excellent ability to penetrate even the smallest fissures by way of capillary action. Excess adhesive on the surface does not appear shiny or cause darkening, which is why it is so useful for use on matt paints. Once dried, excess consolidant can be removed using acetone or aromatics. It will dry quickly but forms a proper film after 24 hours. Once dried the film is thermoplastic so can be flattened and fixed into position using a heated spatula.
As the surface already displayed paint failure, Lascaux 4176 was applied directly with a brush or, for more vulnerable areas, through acid free tissue paper thereby avoiding disruption of the painted surface. The acting conservator will determine whether the paint films are stable enough for Lascaux 4176 to be applied without the assistance of the tissue. The area was then protected with silicone release paper and pressed lightly with a gloved finger to further adhere thepowdered paint to the plaster substrate. Following full consolidation and removal of the tissue, residues of adhesive were safely cleared from the surrounding paint surface using acetone applied with cotton swabs.

1.04.03 Salts

The cleaning of areas shown as affected by salt presence is covered under section 1.02.01 above. Having cleaned the area and the paint surface is sound there is no other consolidation required. However, if the paint surface is powdery then it will need consolidation as described in section 1.04.02 above.

1.04.04 Blanching

Following the cleaning as described in section 1.02 above areas that have suffered blanching of the colour will require consolidation as described in section 1.04.02 above followed by touching-in and enhancement of the paint as described in section 1.04.07 below.

1.04.05 Overpaint

Areas that are distinguished as modern oil-alkyd ‘overpaint’ and ‘overpaint on overpaint‘ on the mapping, following recording, are to be removed back to sound paint by suitable methods including careful scraping. Trials and samples are to be carried out by the conservator to establish the most effective method to remove the modern overpaint whilst retaining as much of the original paint underneath as practicable. The paint could be softened with the heated spatula or hot air pen before removal with nylon scrapers.

1.04.06 Gilding

Following cleaning the gilding as in section 1.02.05 above any significant losses of gilding are to be in-filled to match with equivalent quality and colour of gold leaf on oil size.

1.04.07 Paint Loss

Following cleaning and plaster consolidation any areas of bare plaster or areas of significant depletion of the paint detail should be in-painted
Retouching should as a minimum integrate areas of new filling material and exposed plaster. Detailed retouching of losses in the design is not recommended unless there is firm evidence or record of the last previous scheme in line with the preferred approach of low intervention, and with consideration of the distance at which the panels are viewed. Retouching of exposed areas and the selective enhancement of the scheme, where there is firm evidence and appreciable damage or disfiguring blanching (particularly on the red and yellow), are considered necessary to

maintain the unity and presentation of the scheme when viewed from the ground. A small trial was undertaken by Hirst to integrate a filled loss and an area of consolidated missing
paint that exposed the plaster substrate using acrylic paints matched to the surrounding surface. Care was taken to keep the retouching within the area of loss, and not to encroach upon the surface of the original paint.
Retouching was undertaken using acrylic paints, but the use of dry natural pigments in Paraloid may also be considered an appropriate option, subject to further trials and samples being provided by the conservator within this scope.

1.05 Incidentals

1.05.01 Re-evaluation of Condition

Changes in temperature and humidity levels have the ability to cause cyclical salt dissolution and crystallisation, it is these variations that create stresses that may lead to damage and eventually loss. The condition survey in April 2021 outlined extensive salt activity in many of the panels, which is thought to be partly responsible for areas of paint failure and loss.
It is necessary that prior to conservation works on the panels, the ceiling should be re-appraised by the conservator to determine that their conditions are unchanged from those recorded in April 2021. This should include a survey of the rear of the panel to assess the plaster which will have been cleaned by others.
The condition of the ceiling panels should be monitored visually throughout works and, in the event of changes to condition, it may be necessary to undertake emergency protection/ works as required.

1.05.02 Remove the remnant black plastic on battens around South Africa.

1.05.03 Timber Roof Structure and Ironwork

Allow for minor touching-in black and red striped paint and gilding losses to enhance the decoration on the timber beams, carved beasts and gasolier/tie-beam ironwork following cleaning by others. This can be a provisional quantity or an onsite assessment following completion of the cleaning.

2. Supporting documentation

2.1. Documents

- OTH Great Hall Ceiling Panels: Mapping images with legends showing the defects to be
- rectified. All images are taken from the Hirst Conservation Condition Survey dated April 2021
- Hirst Conservation Condition Survey dated April 2021
- Hirst Cleaning and Consolidation Trials Report dated June 2021
- OTH-HIR-TH-XX-TSB-X-0057 Conservation of the Great Hall ceiling panels July 2022

2.2. Drawings

(copies located in Appendix 1)

A1- India (LL) - Sketch 1 - 2022.pdf
A2- West Indies (upper level) - Sketch 1 - 2022.pdf
A3- Australia (UL) - Sketch 1 - 2022.pdf
A4- Canada (LL) - Sketch 1 - 2022.pdf
B5- Egypt (LL) - Sketch 1 - 2022.pdf
B6- America - Sketch 1 - 2022.pdf
B7- China - Sketch 1 - 2022.pdf
B8- Japan (LL) - Sketch 1 - 2022.pdf
C10- Denmark - Sketch 1 - 2022.pdf
C11- Holland - Sketch 1 - 2022.pdf
C12- Belgium (LL) - Sketch 1 - 2022.pdf
C9- Norway Sweden (LL) - Sketch 1 - 2022.pdf
D13- Paris (LL) - Sketch 1 - 2022.pdf
D14- Russia - Sketch 1 - 2022.pdf
D15- New Zealand - Sketch 1 - 2022.pdf
D16- South Africa (LL) - Sketch 1 - 2022.pdf
E17- Leeds (LL) - Sketch 1 - 2022.pdf
E18- Glasgow - Sketch 1 - 2022.pdf
E19- Bristol - Sketch 1 - 2022.pdf
E20- Bradford (LL) - Sketch 1 - 2022.pdf
F21- London (LL) - Sketch 1 - 2022.pdf
F22- Edinburgh - Sketch 1 - 2022.pdf
F23- Dublin - Sketch 1 - 2022.pdf
F24- Liverpool (LL) - Sketch 1 - 2022.pdf
G25- Victoria Regina (LL) - Sketch 1 - 2022.pdf
G26- Manchester (UL) - Sketch 1 - 2022.pdf
G27 - Salford - Sketch 1 - 2022.pdf
G28- sovereyne (LL) - Sketch 1 - 2022.pdf

3. Assessment of condition

3.1. Method and limitations

Visual assessment undertaken from scaffold platform in advance of main works. Assessment of the upper side of the ceiling it to be completed by others and photographic/ diagrammatic record of the condition is to be reviewed against the condition of the painted surface.

3.2. Plaster

3.2.1. General

Generally, the plaster support appears to be in sound condition. Some areas of hollow/ movement were noted, there are largely in line with the previous survey in 2021.

3.3. Paint decoration

No significant change in condition was noted between the 2021 survey and the current condition. The condition of the ceiling panels should be monitored visually throughout works and, in the event of changes to condition, it may be necessary to undertake emergency protection/ works as required. A more detailed understanding of the overpaint will inevitably be achieved during the actual works, from increased familiarity of the painted surface, the impact of cleaning agents and sampling/site microscopy. Areas of overpaint will be continually reviewed as work progresses and any variations flagged at the earliest opportunity.

3.4. Actions

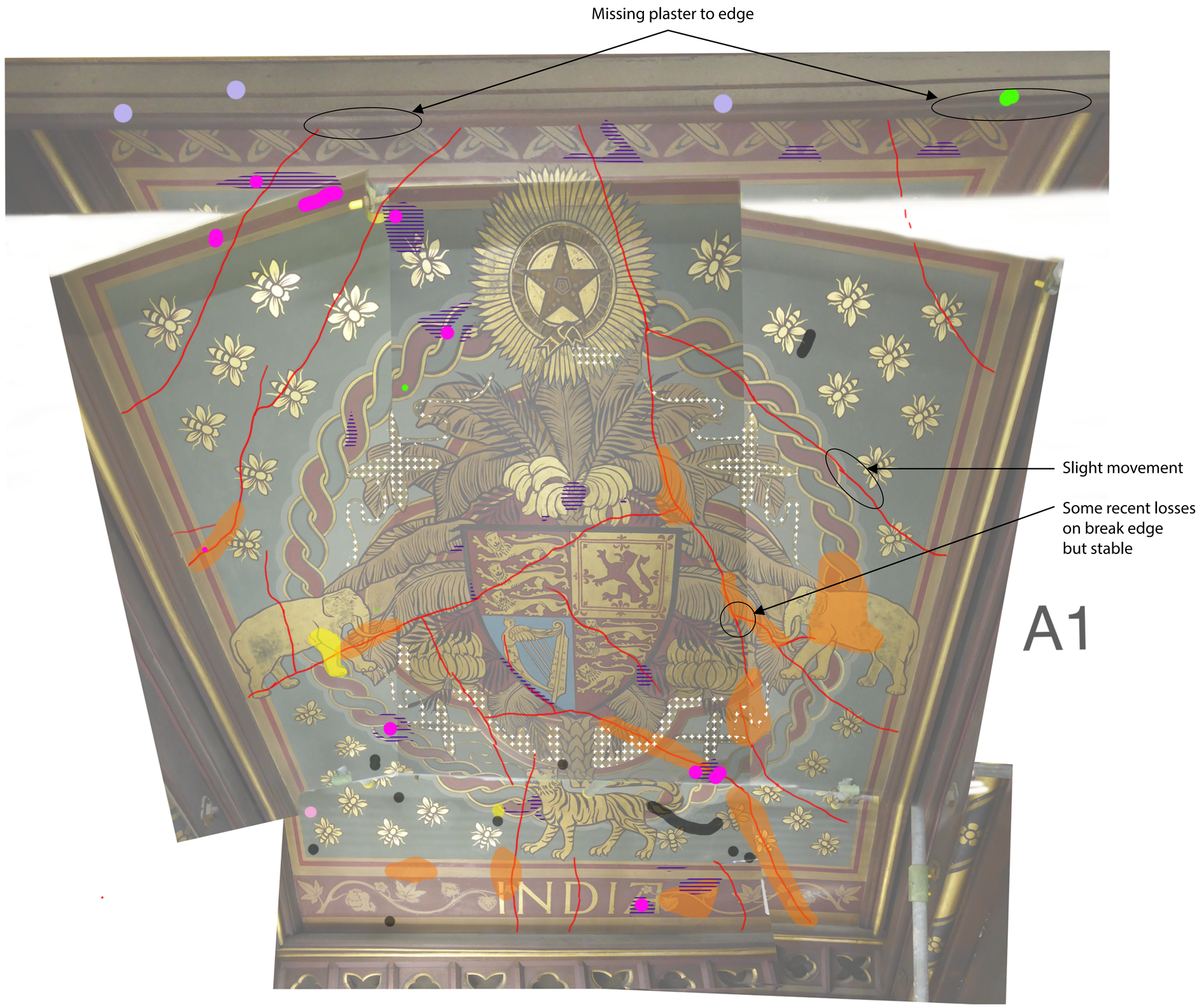
Condition observation	Proposed action	Agreed action
Hollow/ movement in plaster	Review against assessment of the upper side of the ceiling.	TBA
Paint conservation	In line with specified works and can commence ahead of any remedial works to plaster (see technical submission for method).	

Appendix 1: 2022 Validation Survey Drawings



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Manchester Town Hall

A1 - India - Sketch 1

2022

Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

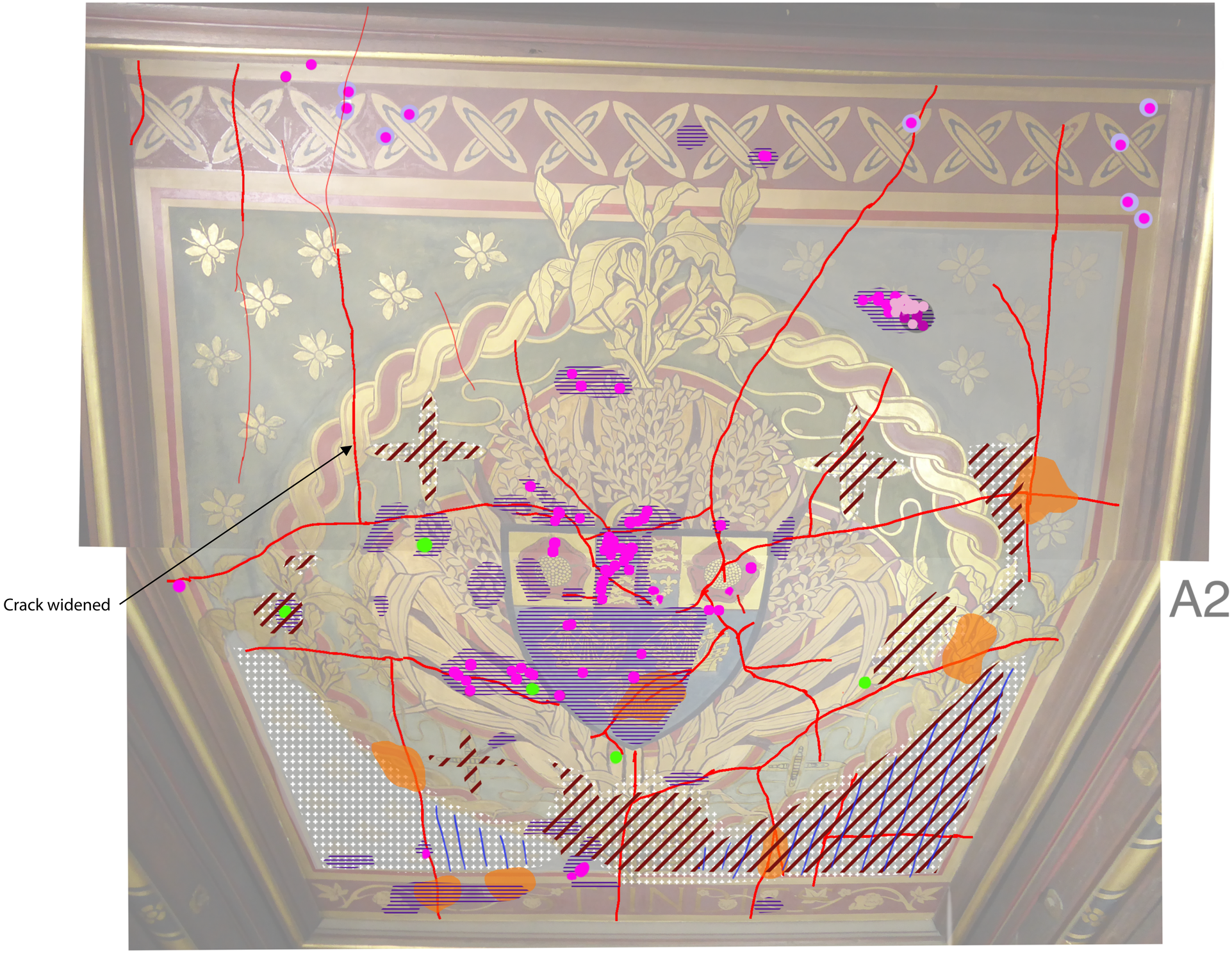
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Manchester Town Hall

A2 - West Indies - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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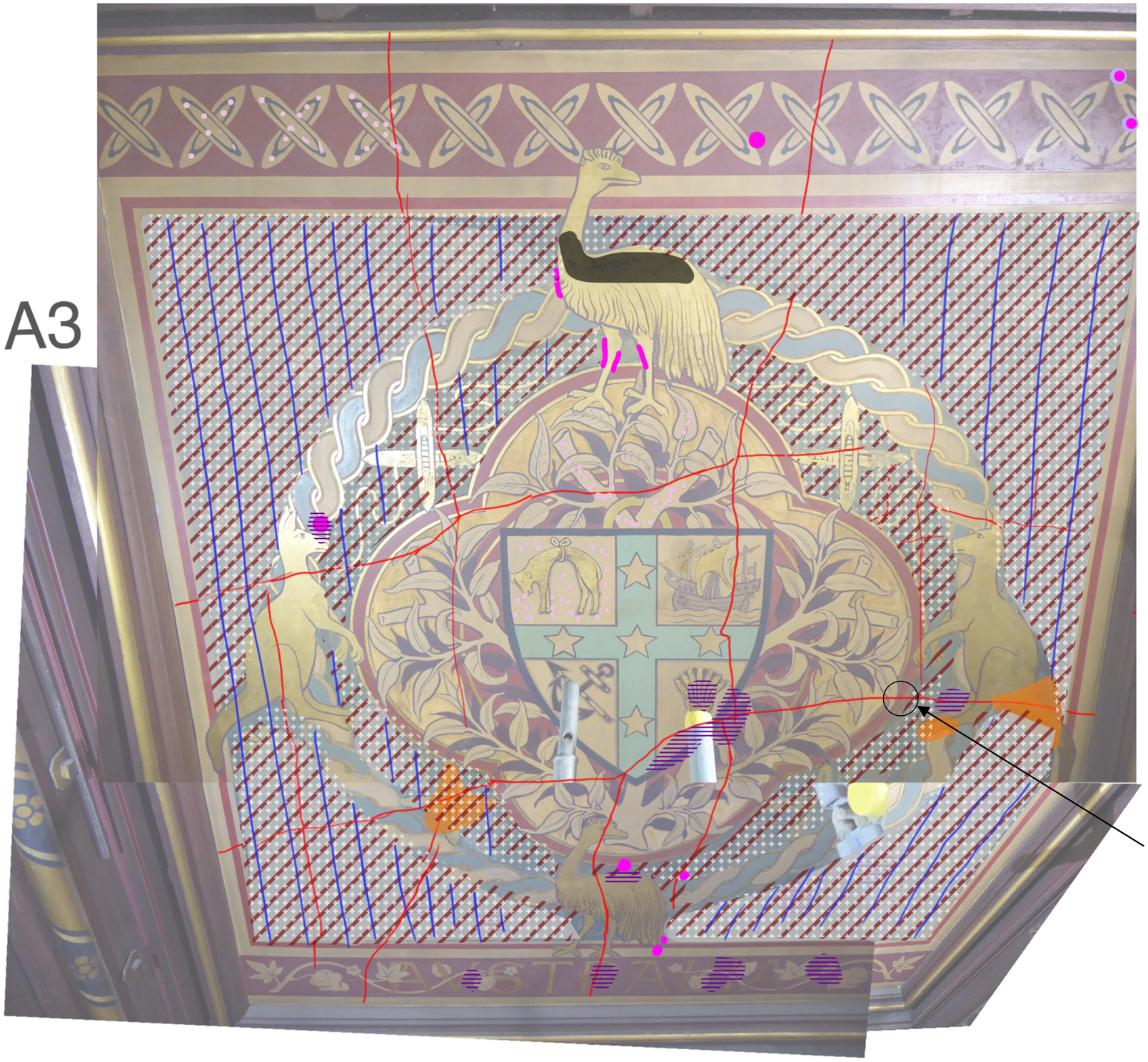
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A3 - Australia - Sketch 1

2022

A3



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

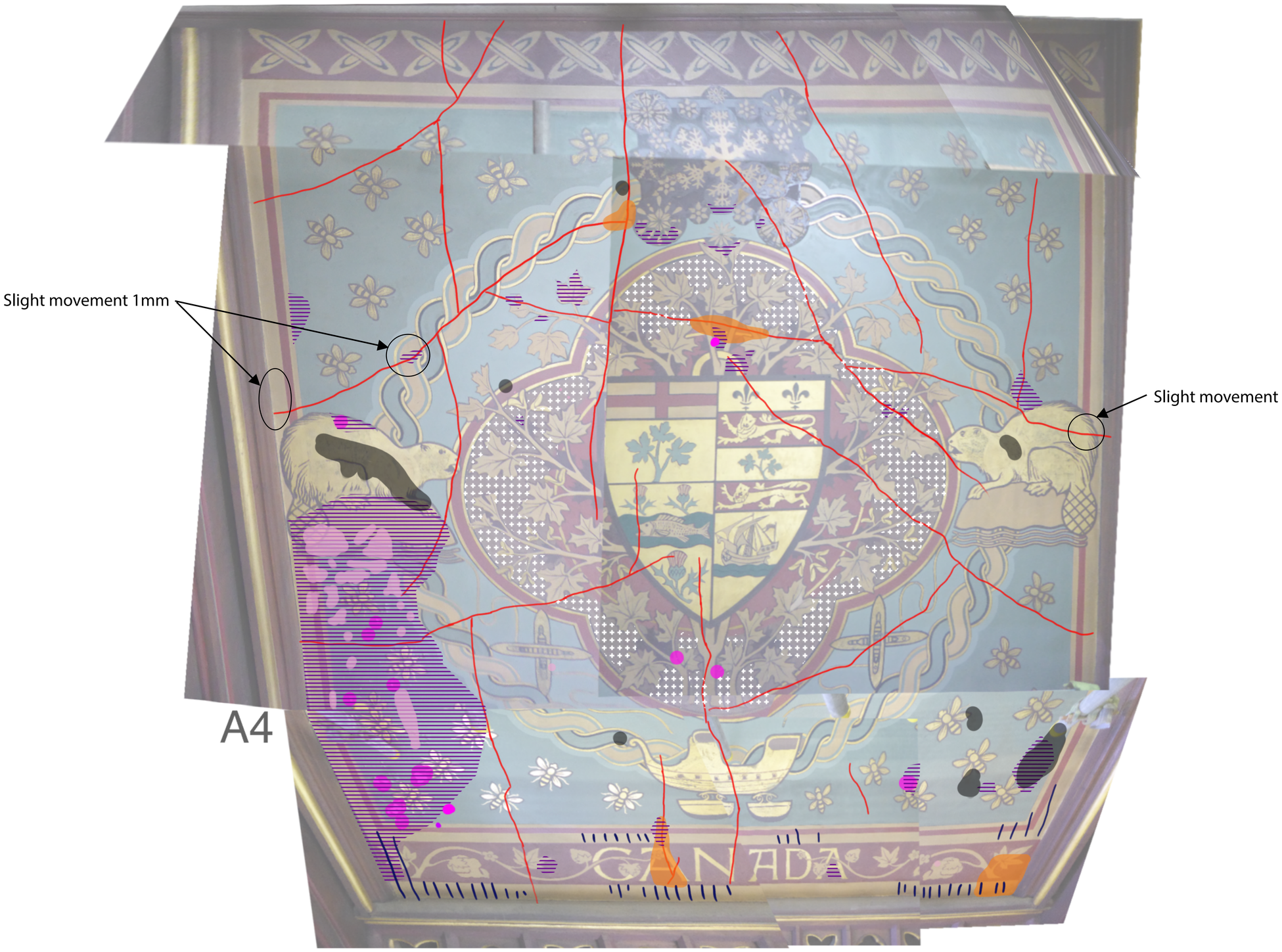
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Manchester Town Hall

A4 - Canada (LL) - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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B5 - Egypt - Sketch 1

2022

Movement on edge possible detachment of plaster

Slight movement - 1mm

B5

Timber appears to have moved away from panel, 1-2mm movement

Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
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- Flaking Paint:
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- Solvent Damage:
- Overpaint:
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- Surface Accretions:
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- Paint Loss:

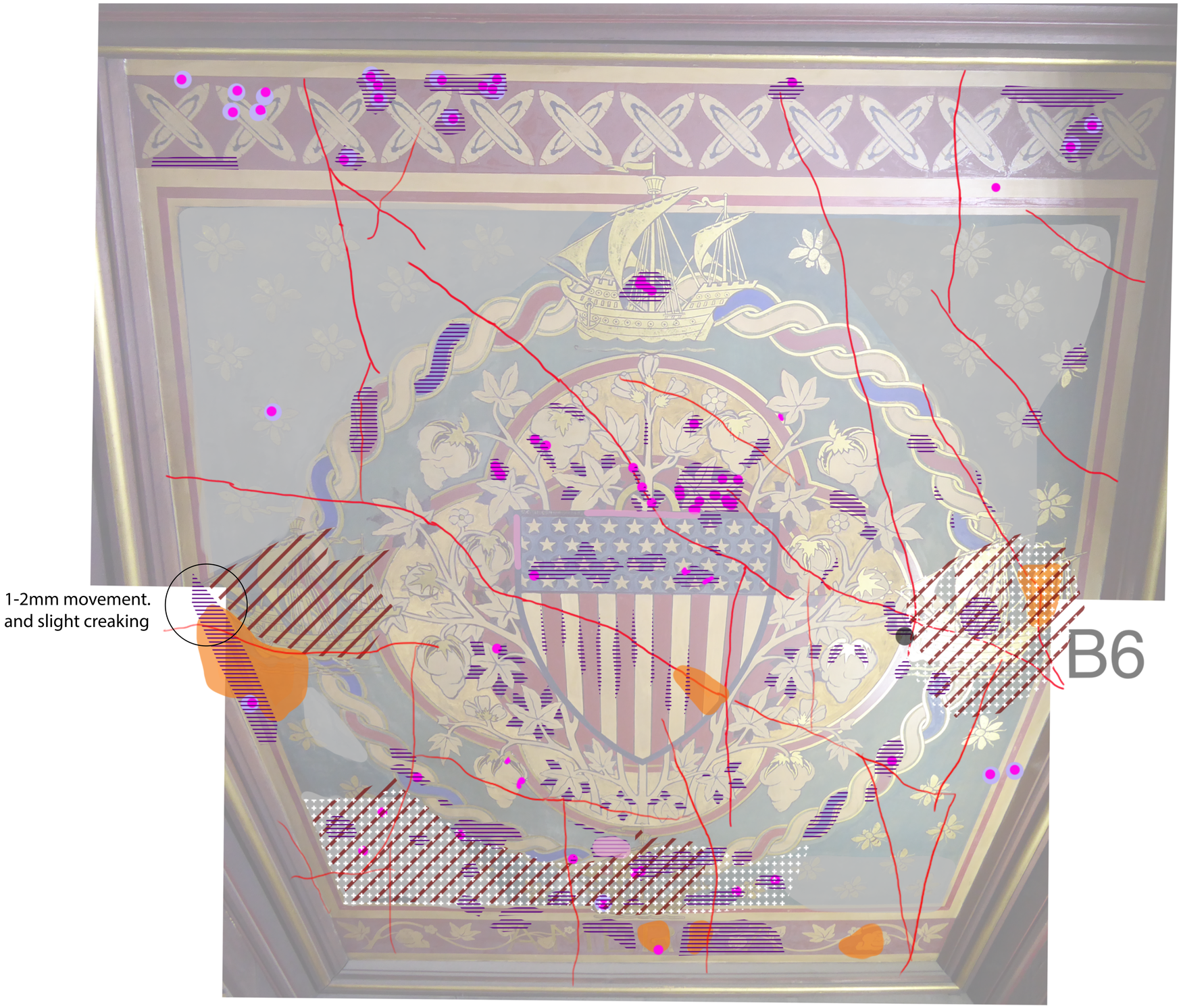
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B6 - America - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
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- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
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- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

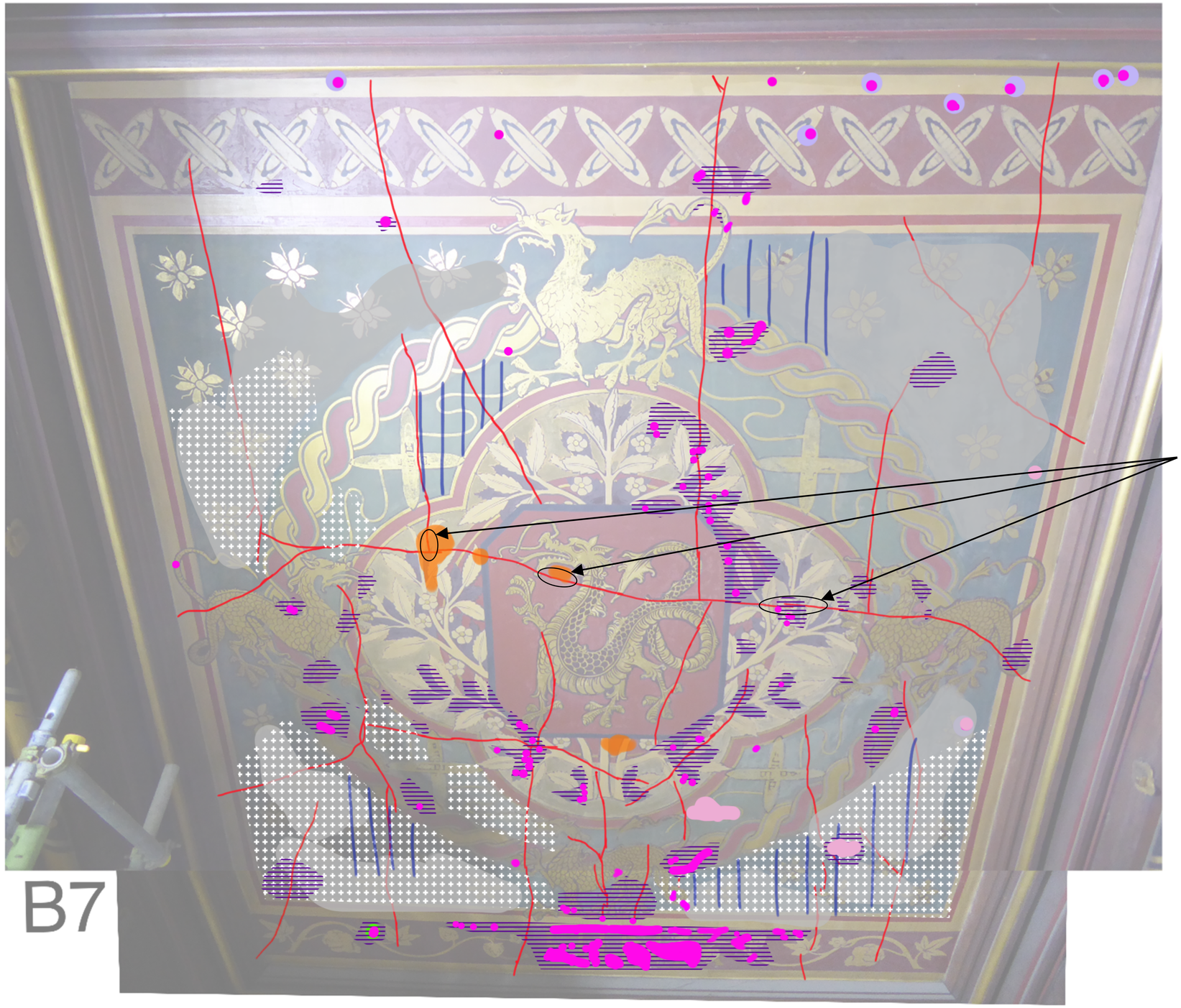
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B7 - China - Sketch 1

2022

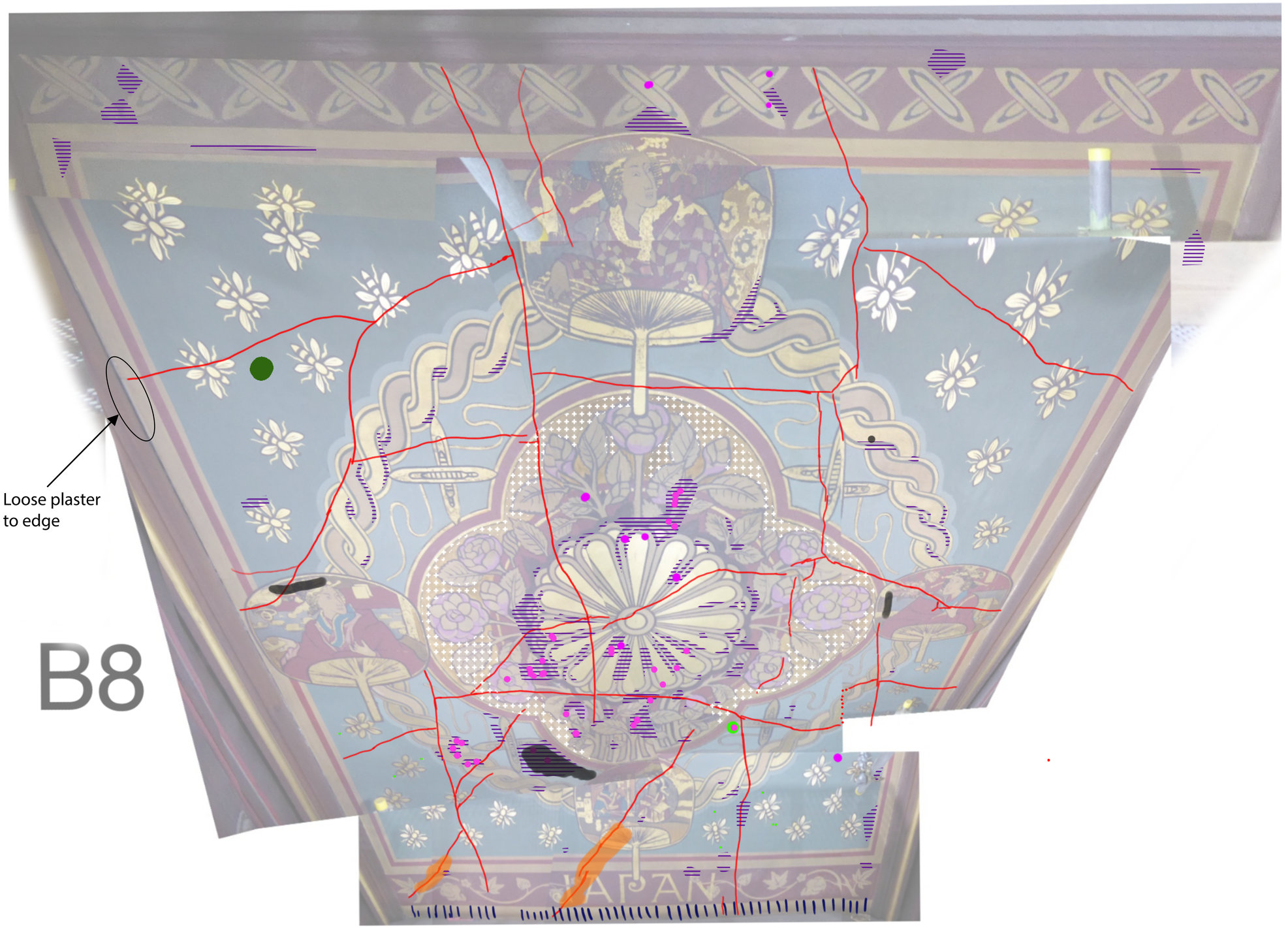


Key

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- Hollow Plaster:
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- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
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- Overpaint:
- Overpaint over Overpaint:
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- Gilding Previously Cleaned:
- Paint Loss:

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B8 - Japan (LL) - Sketch 1

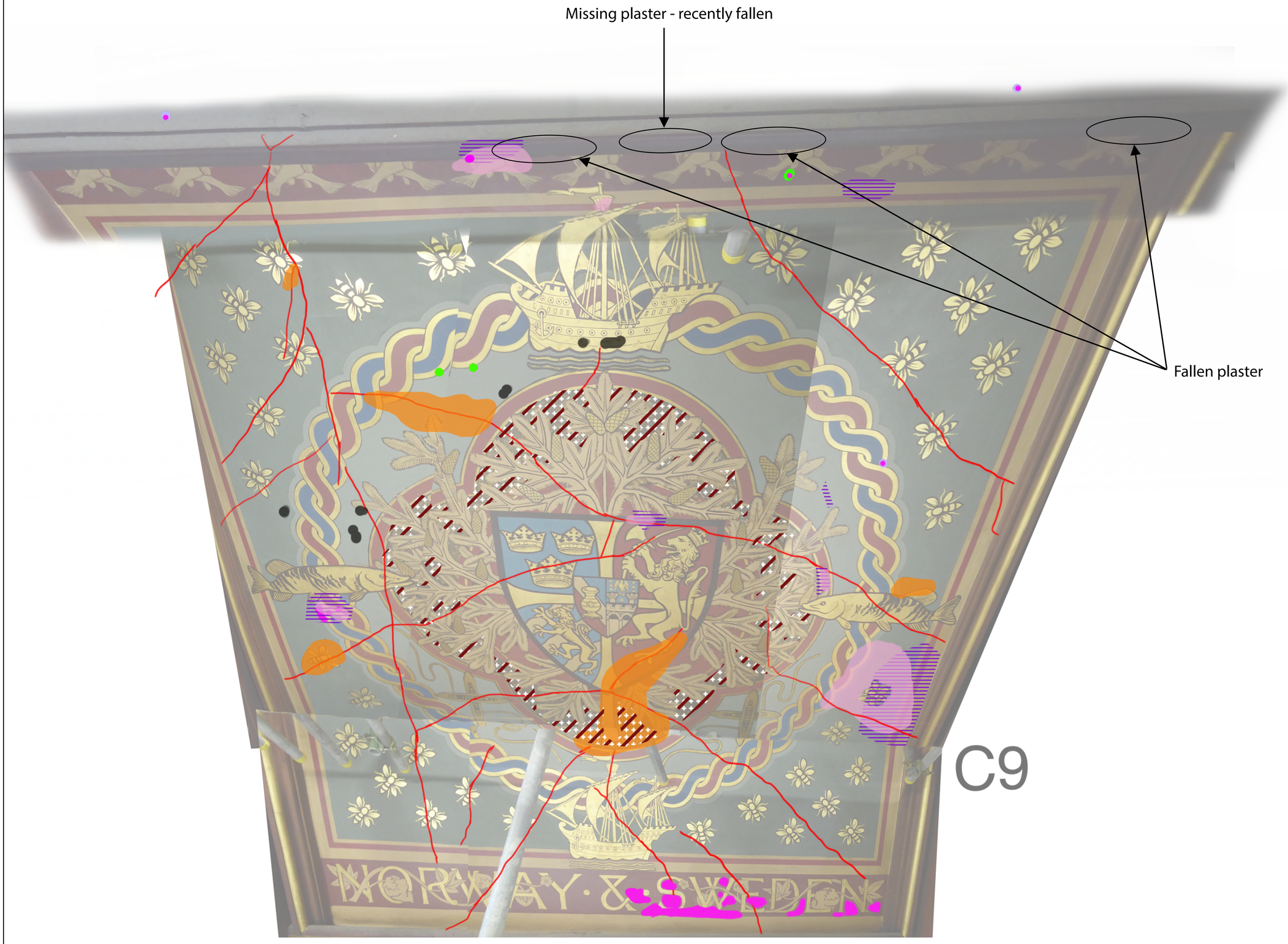
2022

Key

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- Hollow Plaster:
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- Plaster Repair:
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- Mechanical Impact (shotgun holes):
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- Overpaint over Overpaint:
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- Paint Loss:

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C9 - Norway - Sketch 1

2022

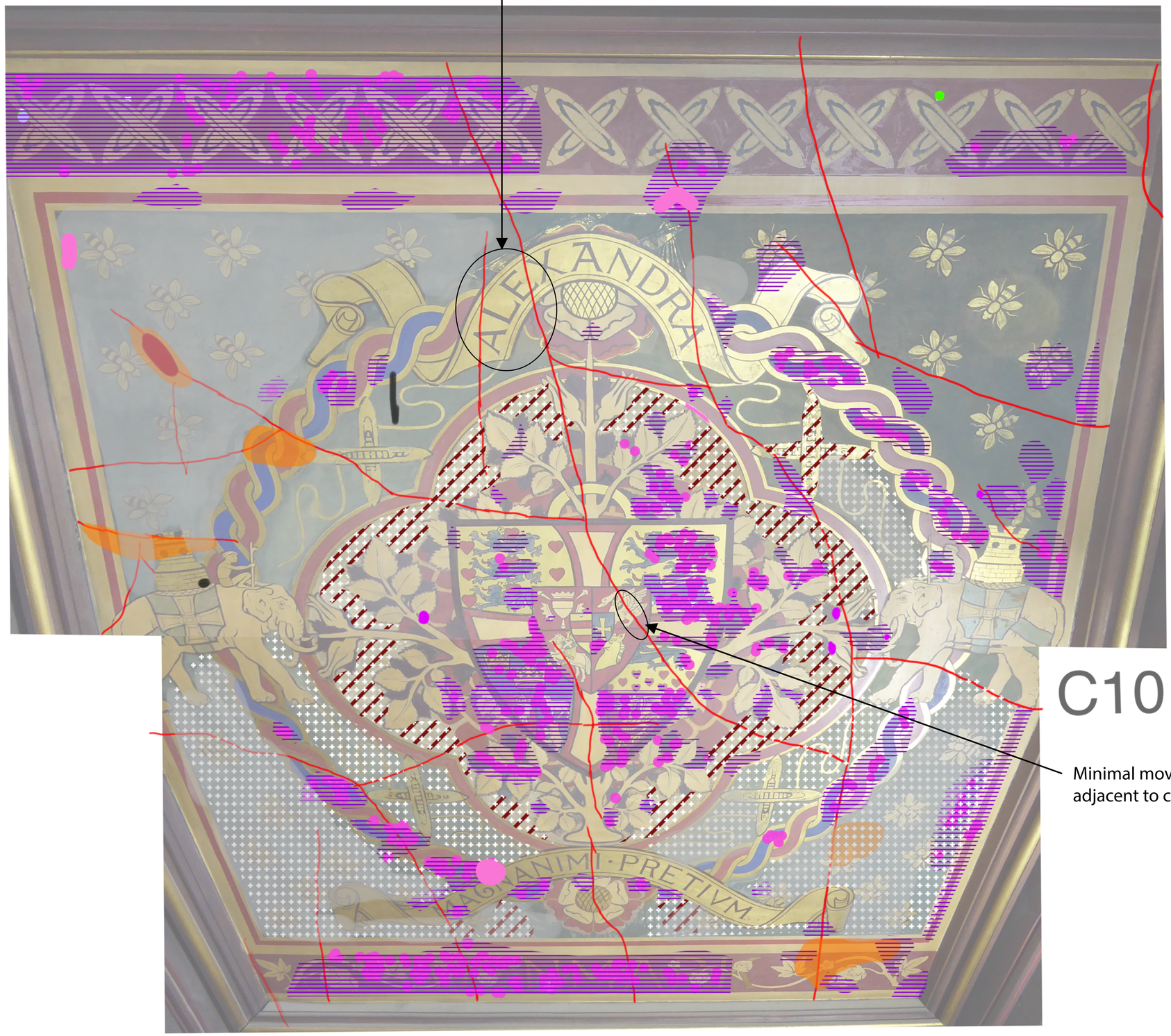
Key

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Hollow Plaster:	
Unstable Moving Plaster:	
Plaster Repair:	
Plaster Loss:	
Mechanical Impact (shotgun holes):	
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Gilding Previously Cleaned:	
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Small amount of
movement to large area



C10

Minimal movement
adjacent to crack

Manchester Town Hall

C10 Denmark - Sketch 1

2022

Key

Fractures:
Unstable Fractures:
Hollow Plaster:
Unstable Moving Plaster:
Plaster Repair:
Plaster Loss:
Mechanical Impact (shotgun holes):
Flaking Paint:
Powdering Paint:
Salts:
Blanching:
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Gilding Previously Cleaned:
Paint Loss:

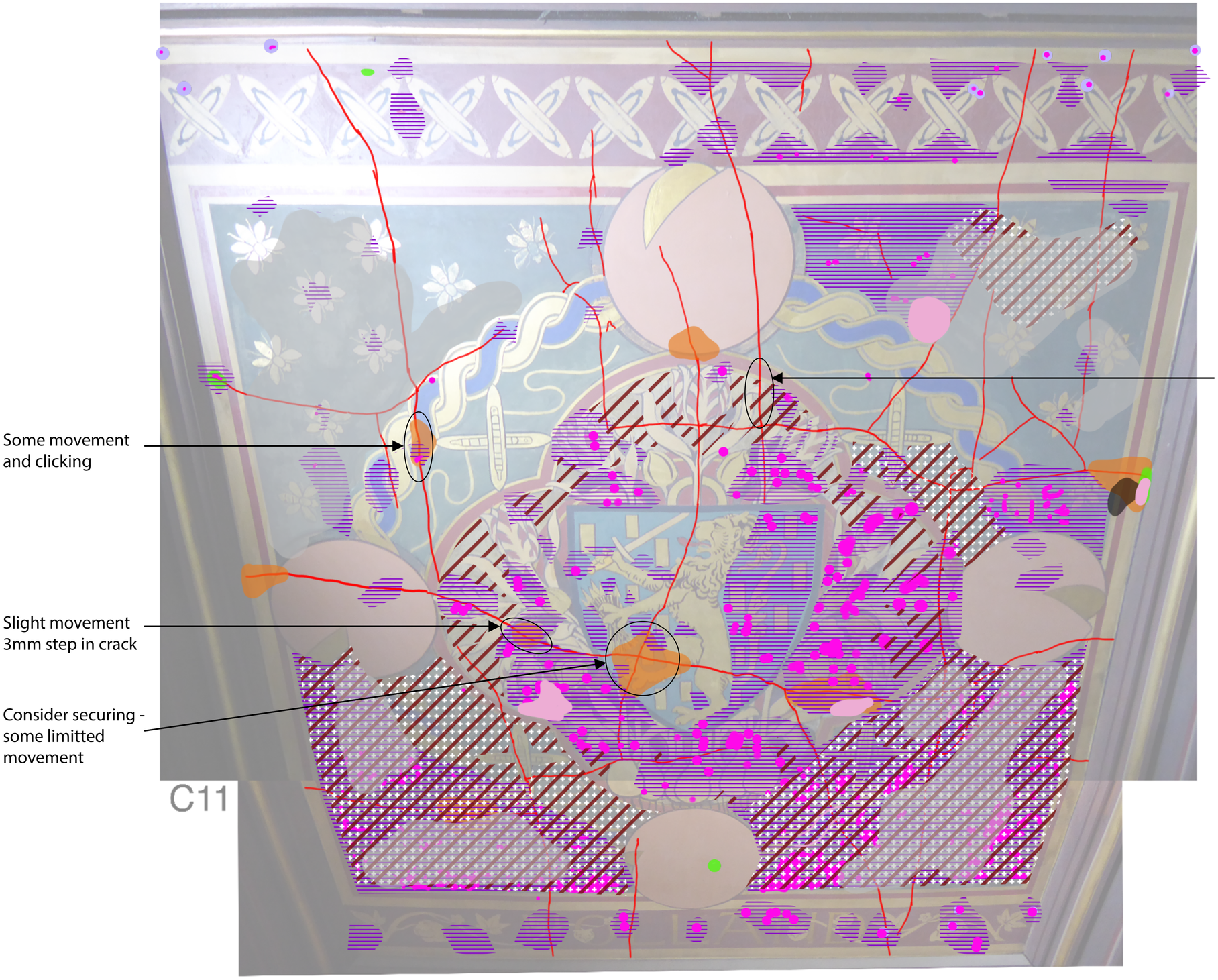
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Manchester Town Hall

C11 Holland - Sketch 1

2022

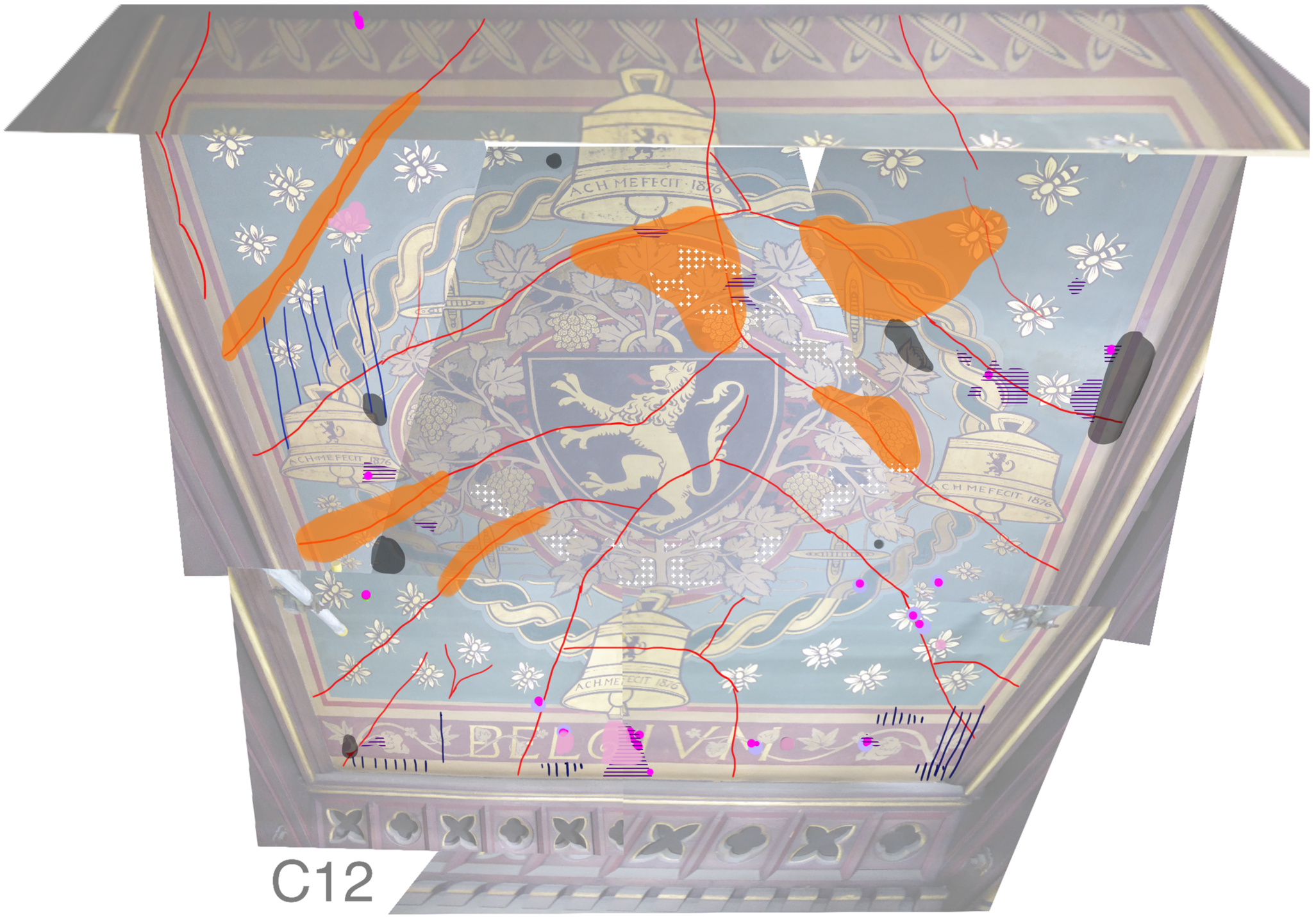


Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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C12 - Belgium (LL) - Sketch 1

2022

Key

Fractures:

Unstable Fractures:

Hollow Plaster:

Unstable Moving Plaster:

Plaster Repair:

Plaster Loss:

Mechanical Impact (shotgun holes):

Flaking Paint:

Powdering Paint:

Salts:

Blanching:

Water Runs:

Solvent Damage:

Overpaint:

Overpaint over Overpaint:

Surface Accretions:

Gilding Previously Cleaned:

Paint Loss:

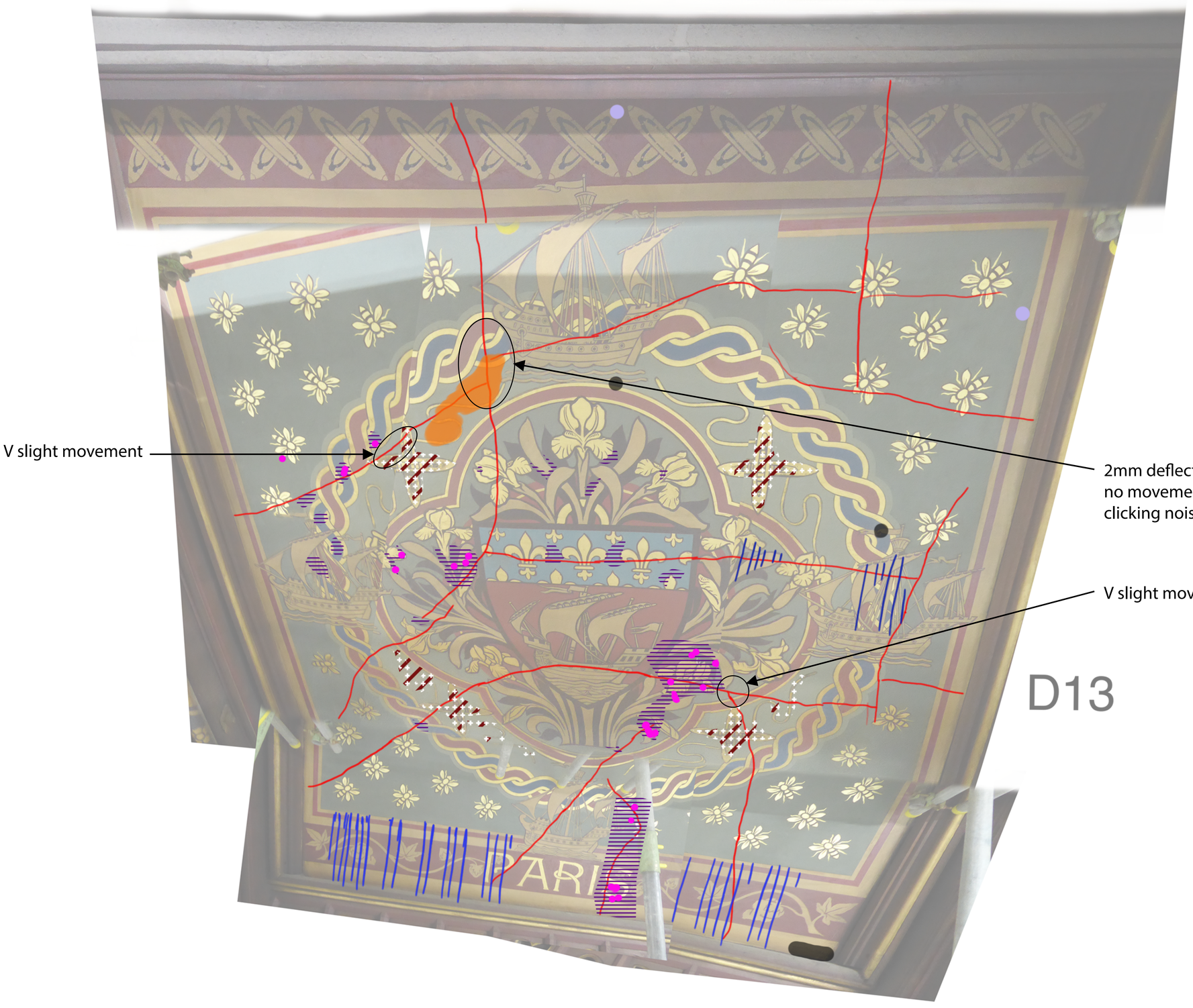
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D13 - Paris - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

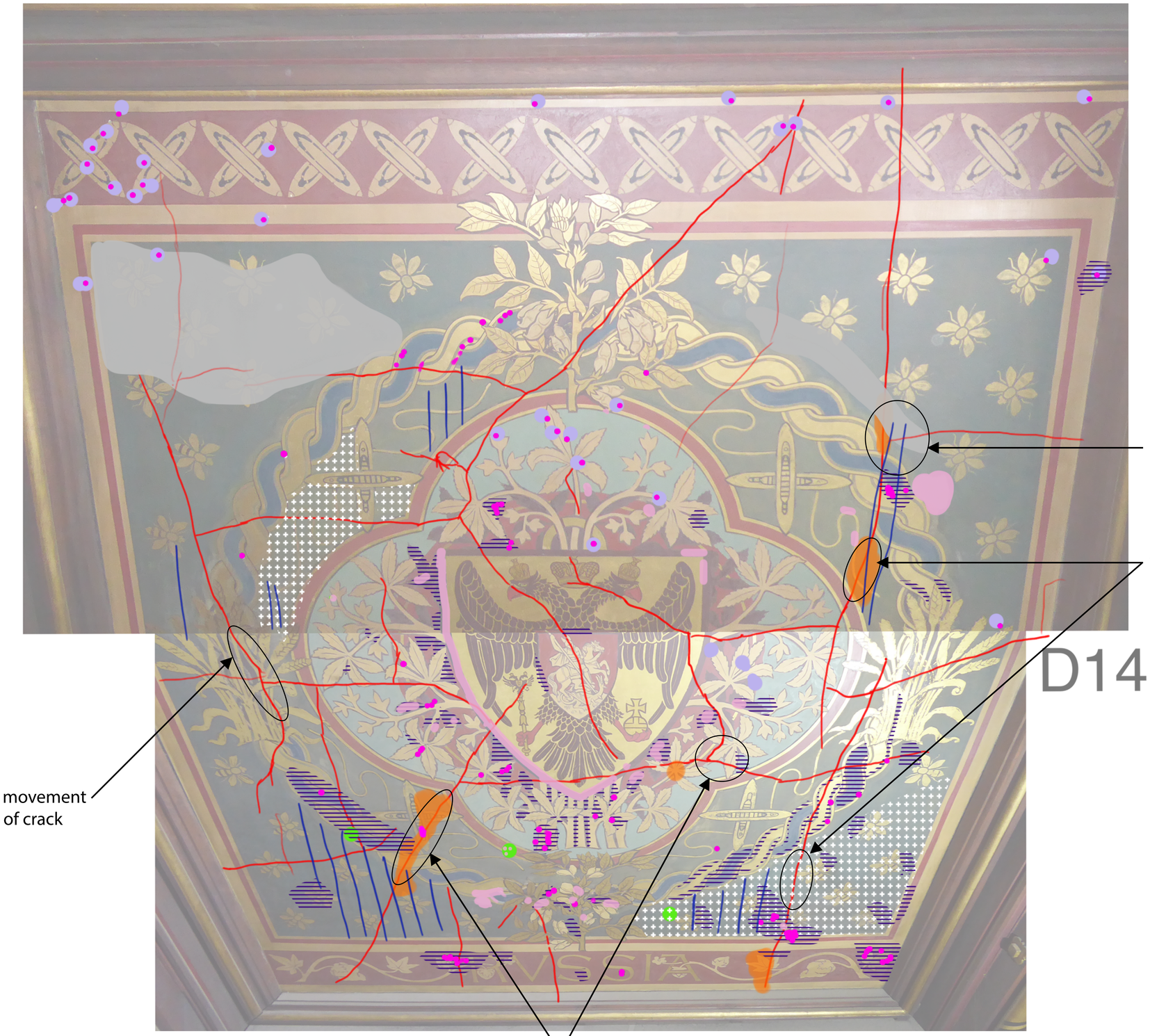
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D14 - Russia - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

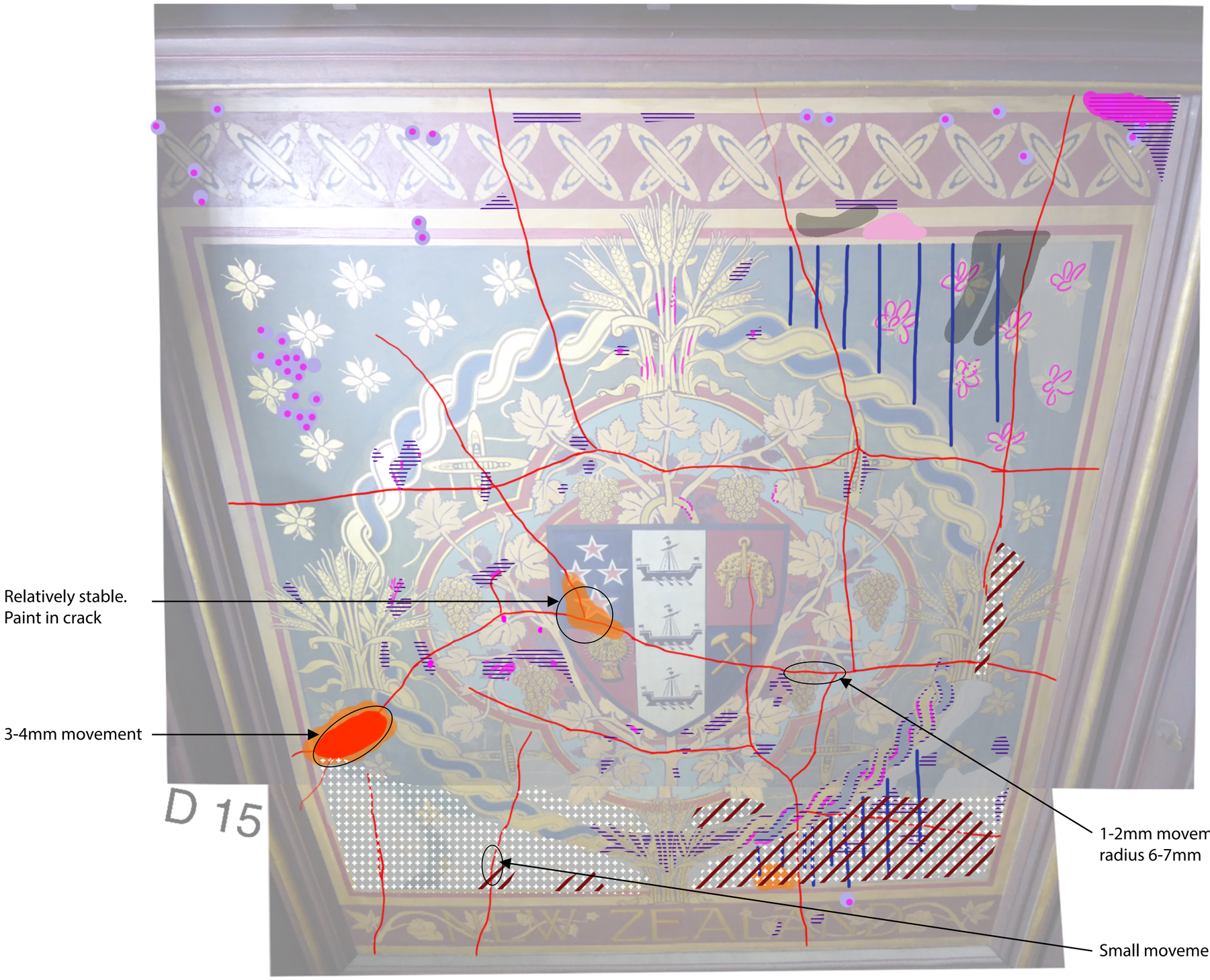
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D15 - New Zealand - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

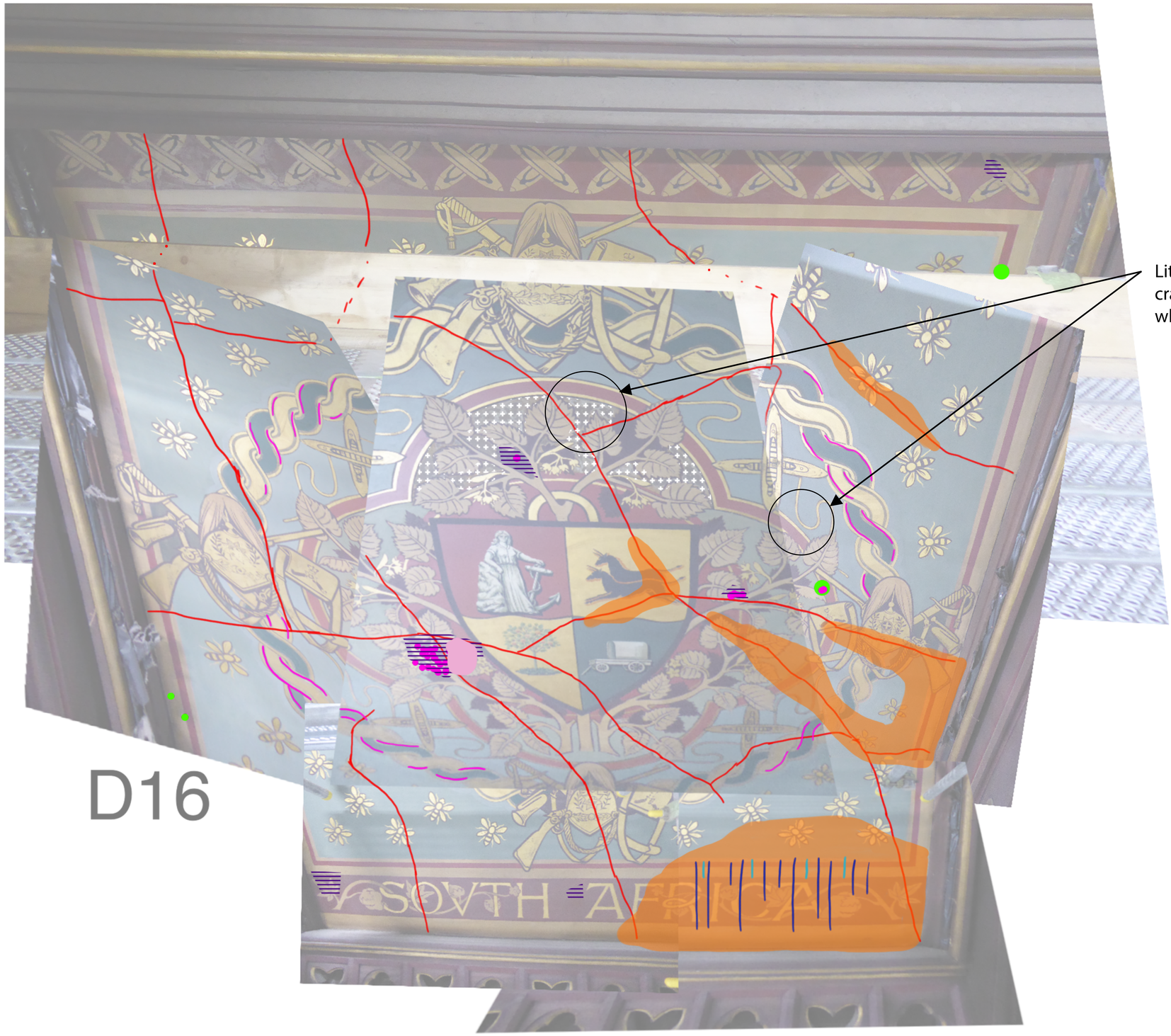
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D16 - South Africa (LL) - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

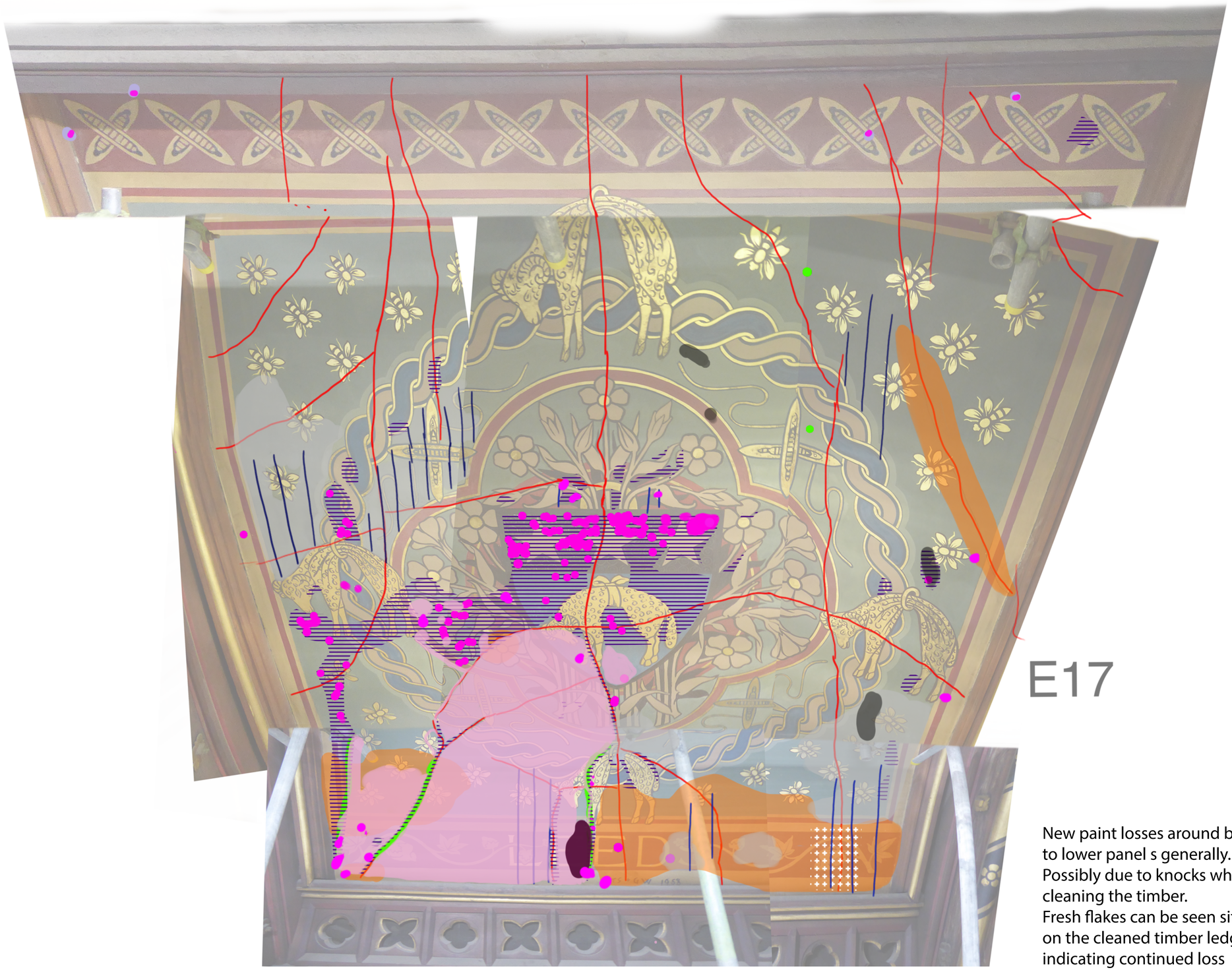
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E17 - Leeds - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

New paint losses around border to lower panel s generally.
Possibly due to knocks when cleaning the timber.
Fresh flakes can be seen sitting on the cleaned timber ledge indicating continued loss

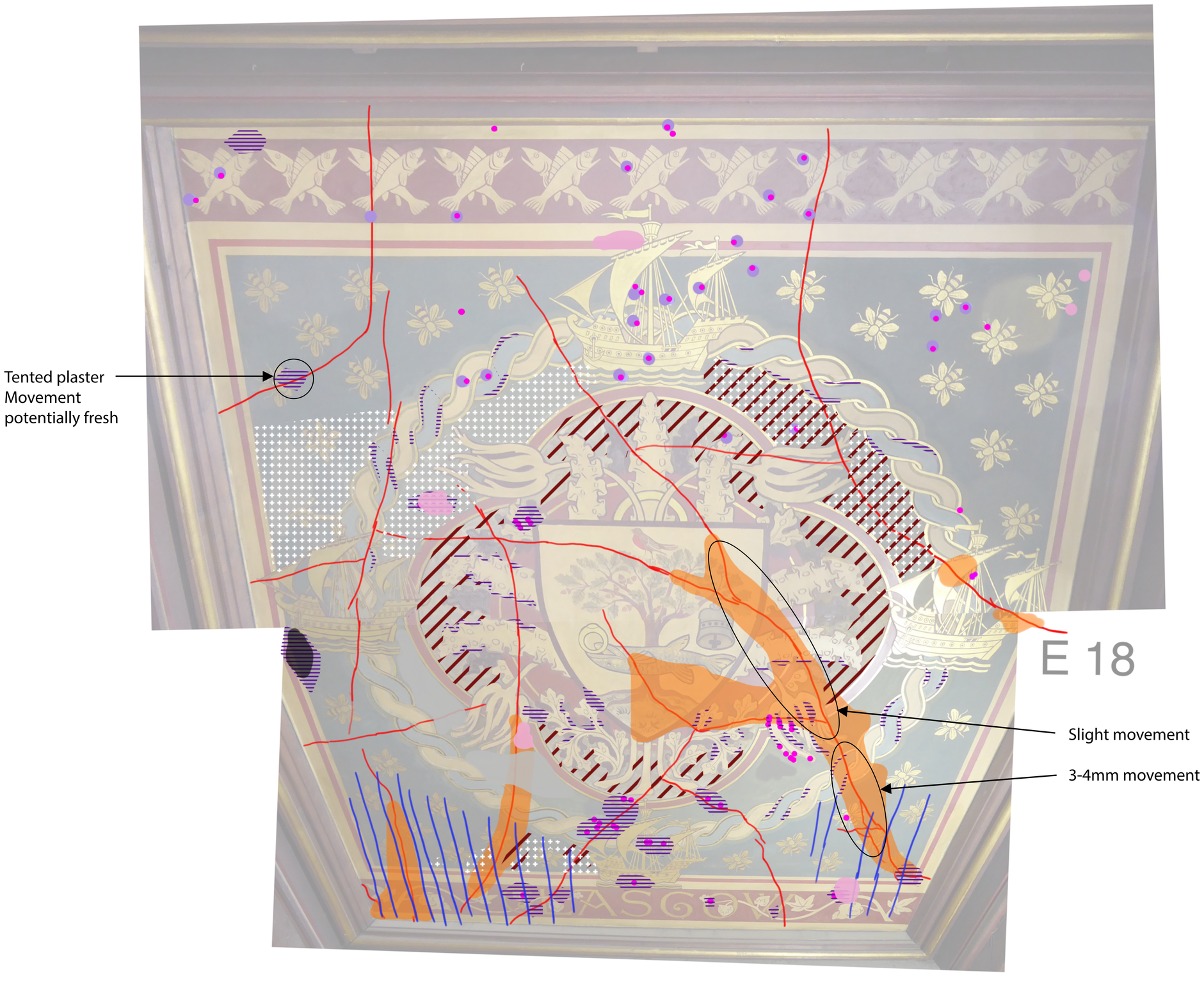
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E18 - Glasgow - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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E19 - Bristol - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

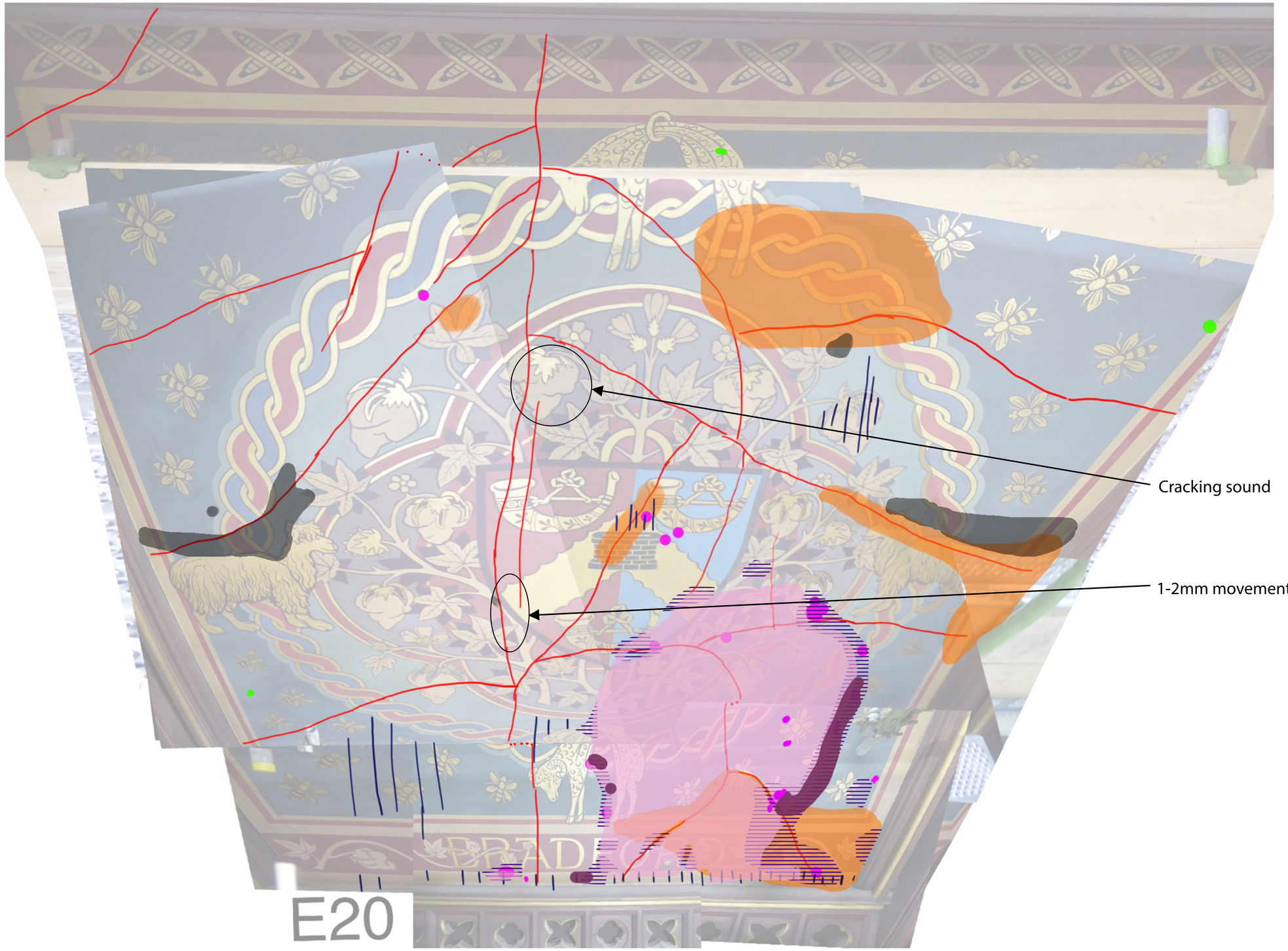
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E20 - Bradford (LL) - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

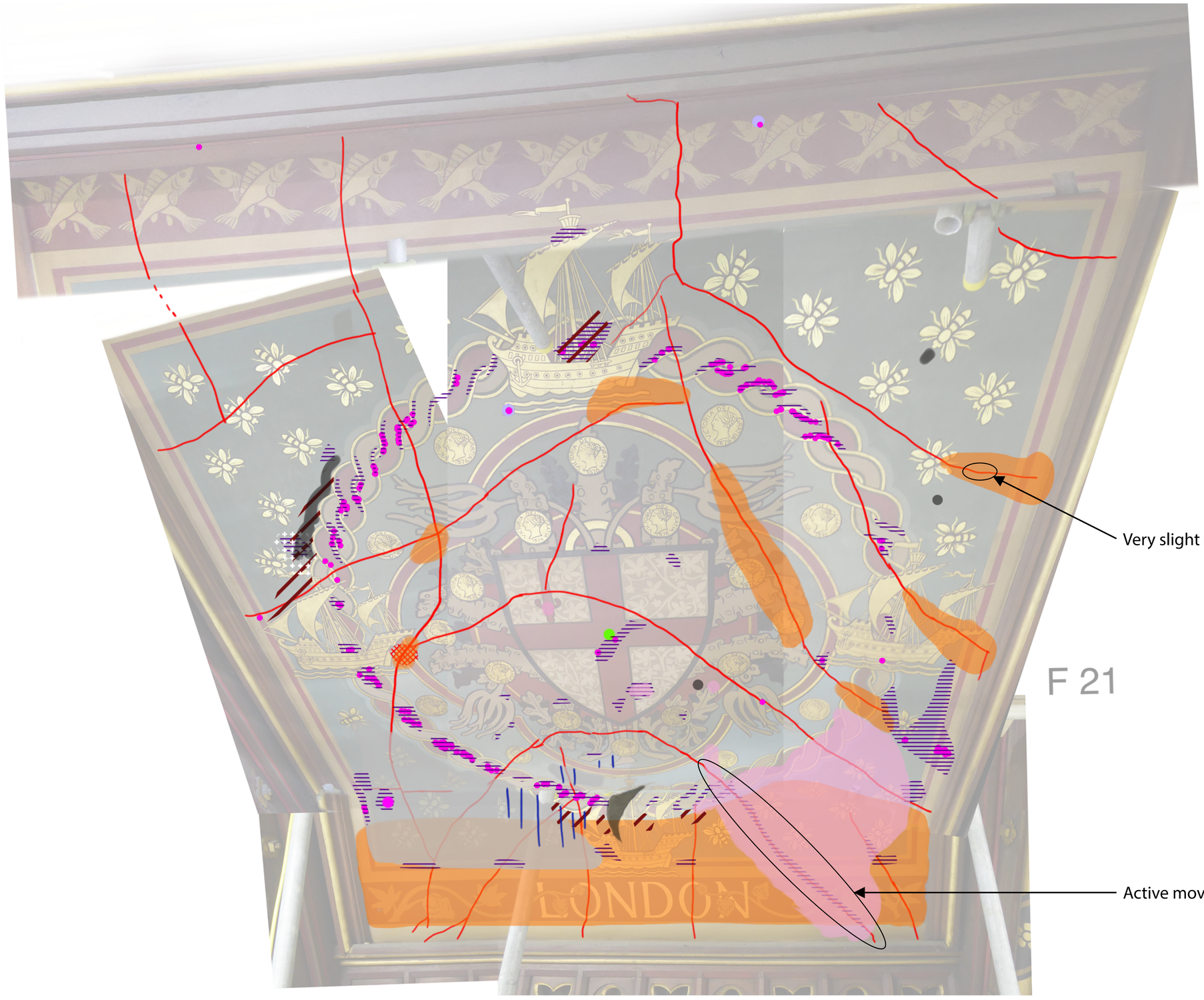
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F21 - London - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

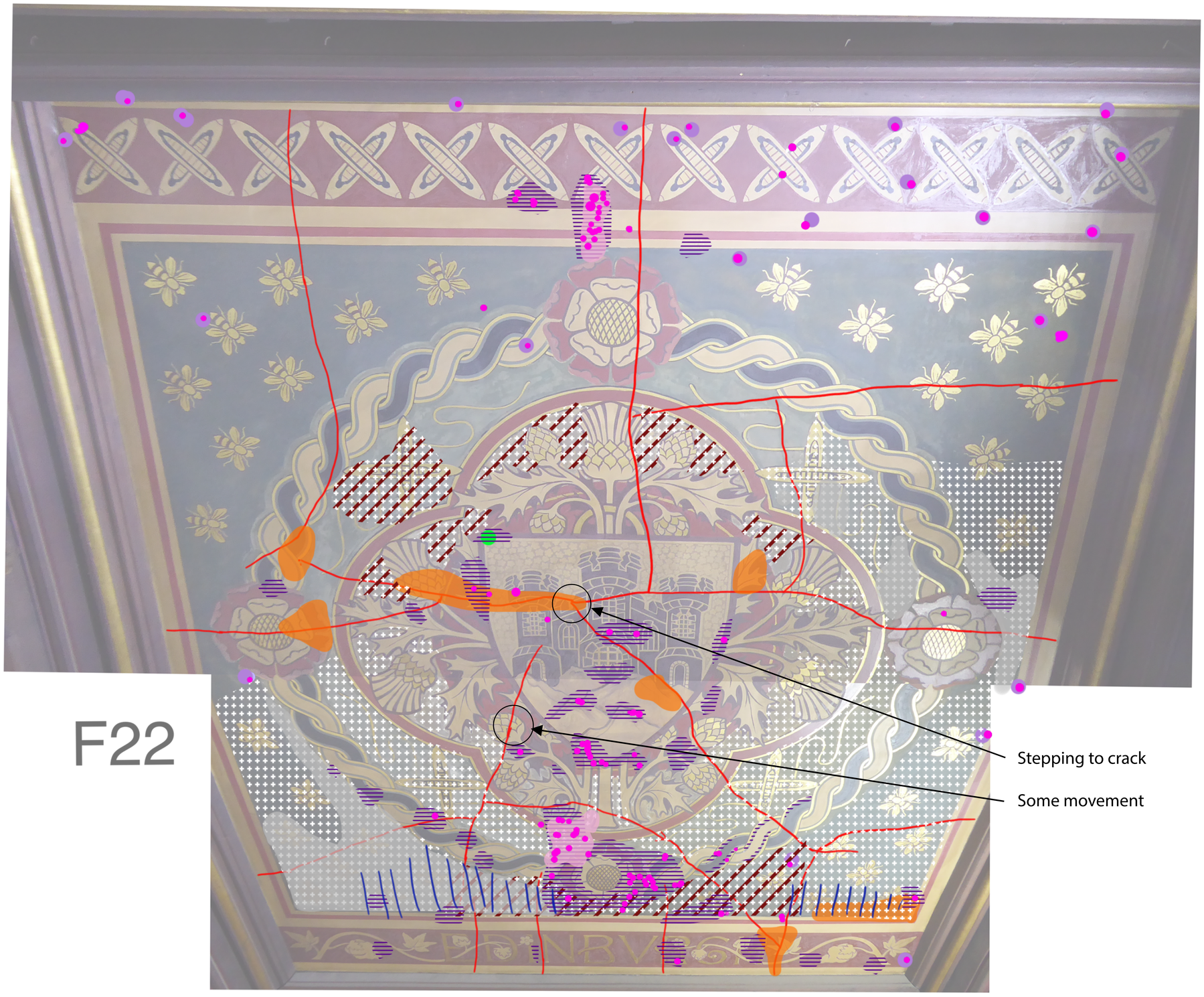
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F22 - Edinburgh - Sketch 1

2022

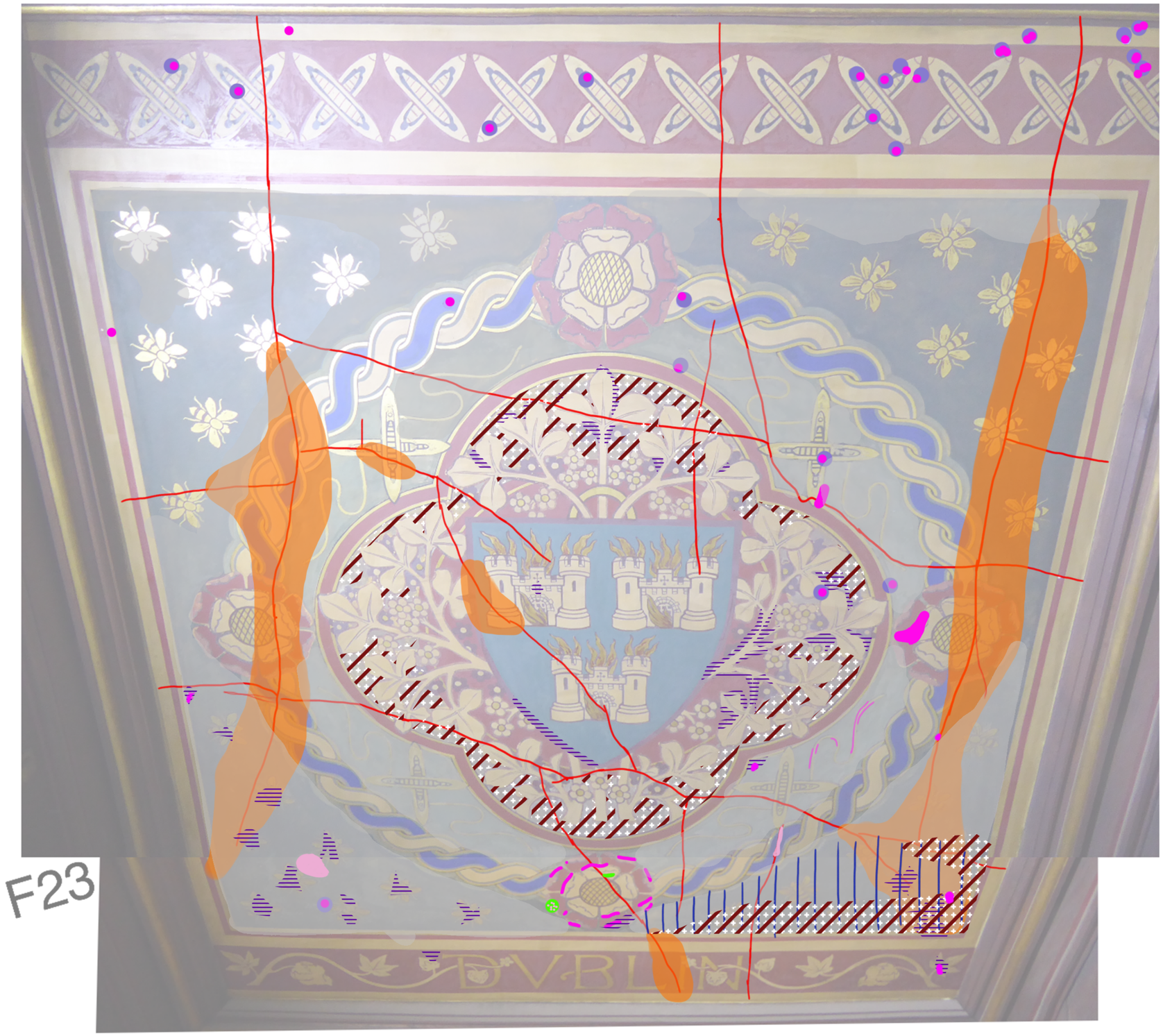


Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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F23 - Dublin - Sketch 1

2022

Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

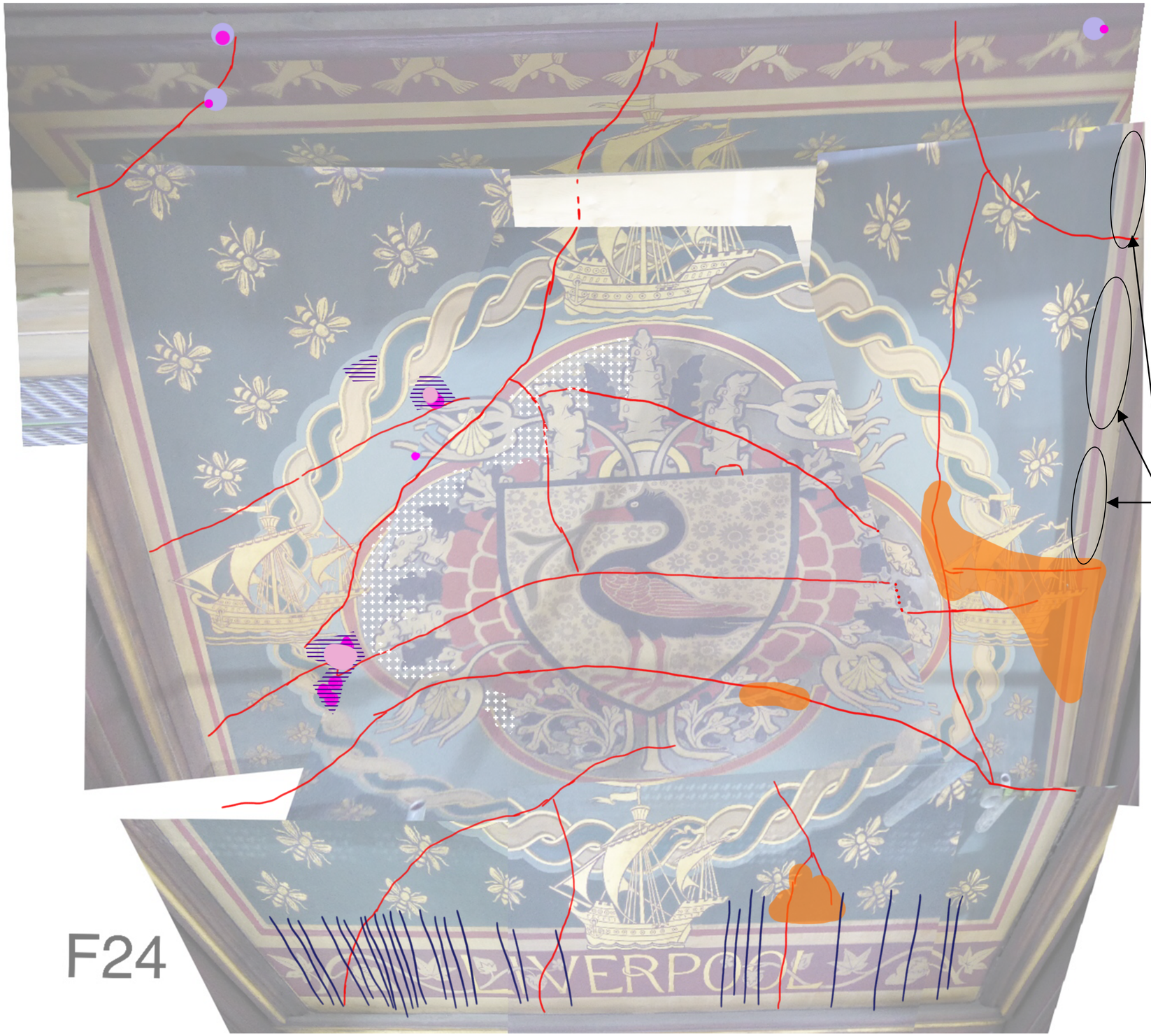
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Manchester Town Hall

F24 - Liverpool (LL) - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

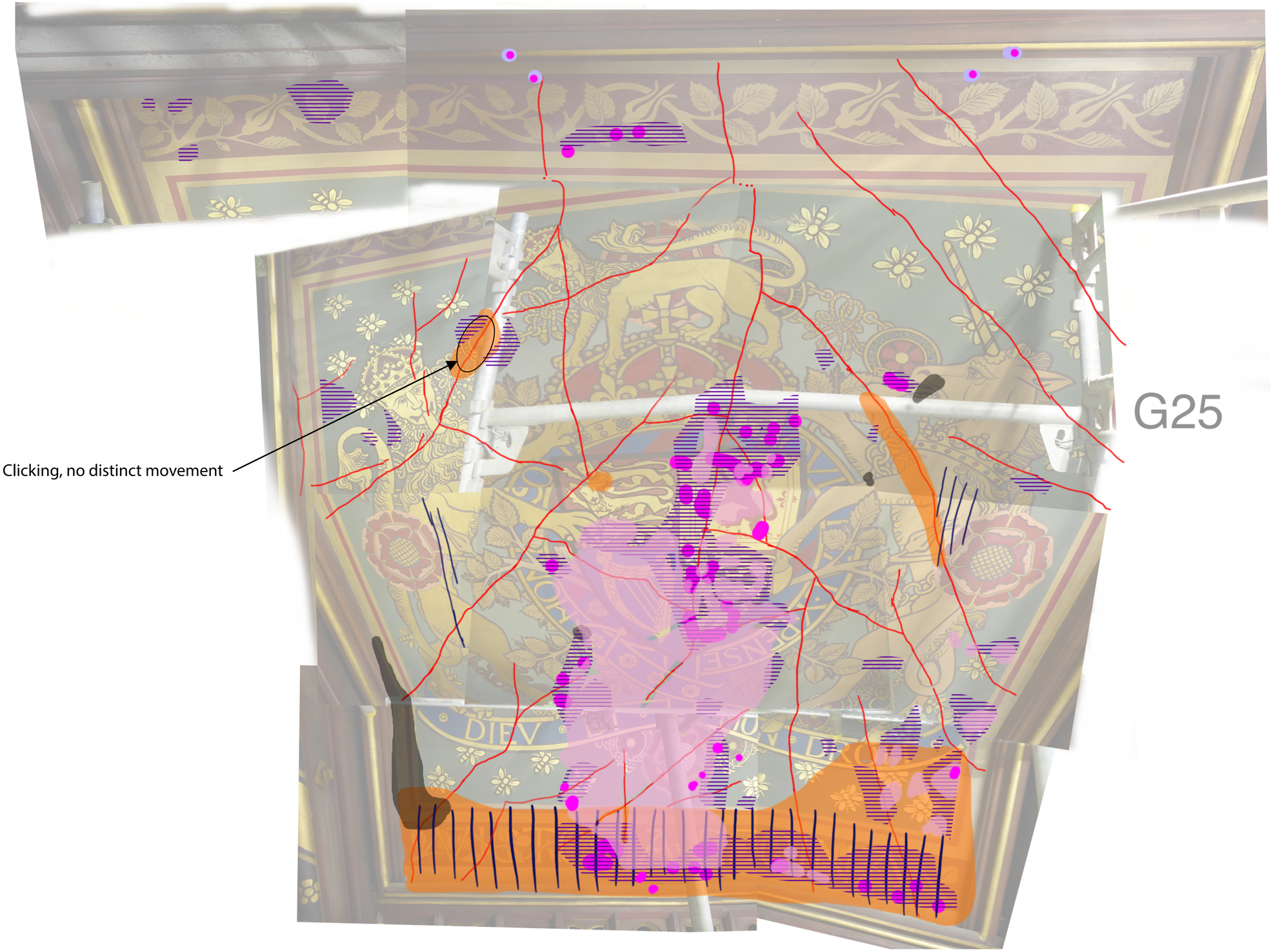
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G25 - Victoria Regina (LL) - Sketch 1

2022



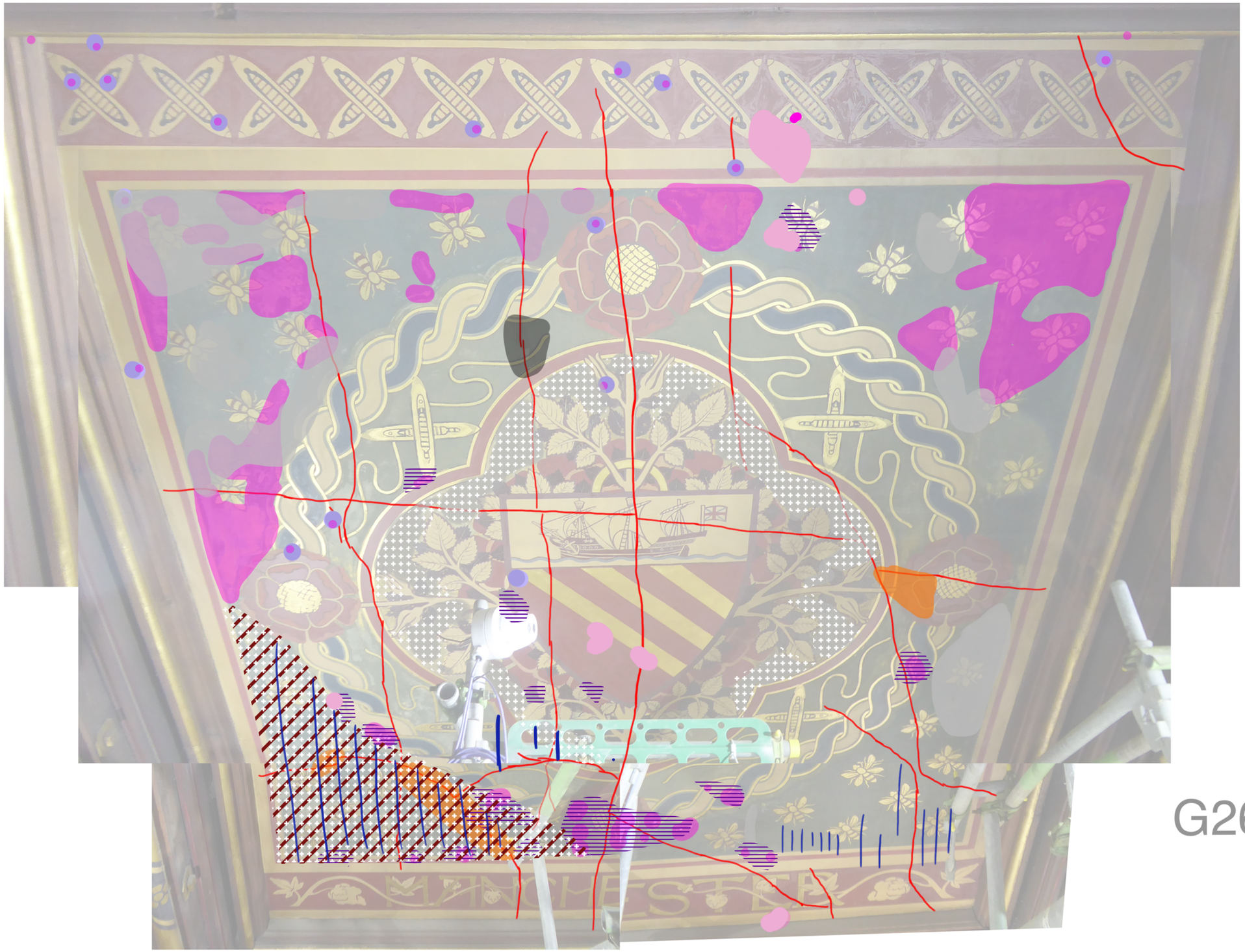
Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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Note: limited access due to stairwell



G26

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G26 - Manchester (UL) - Sketch 1

2022

Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

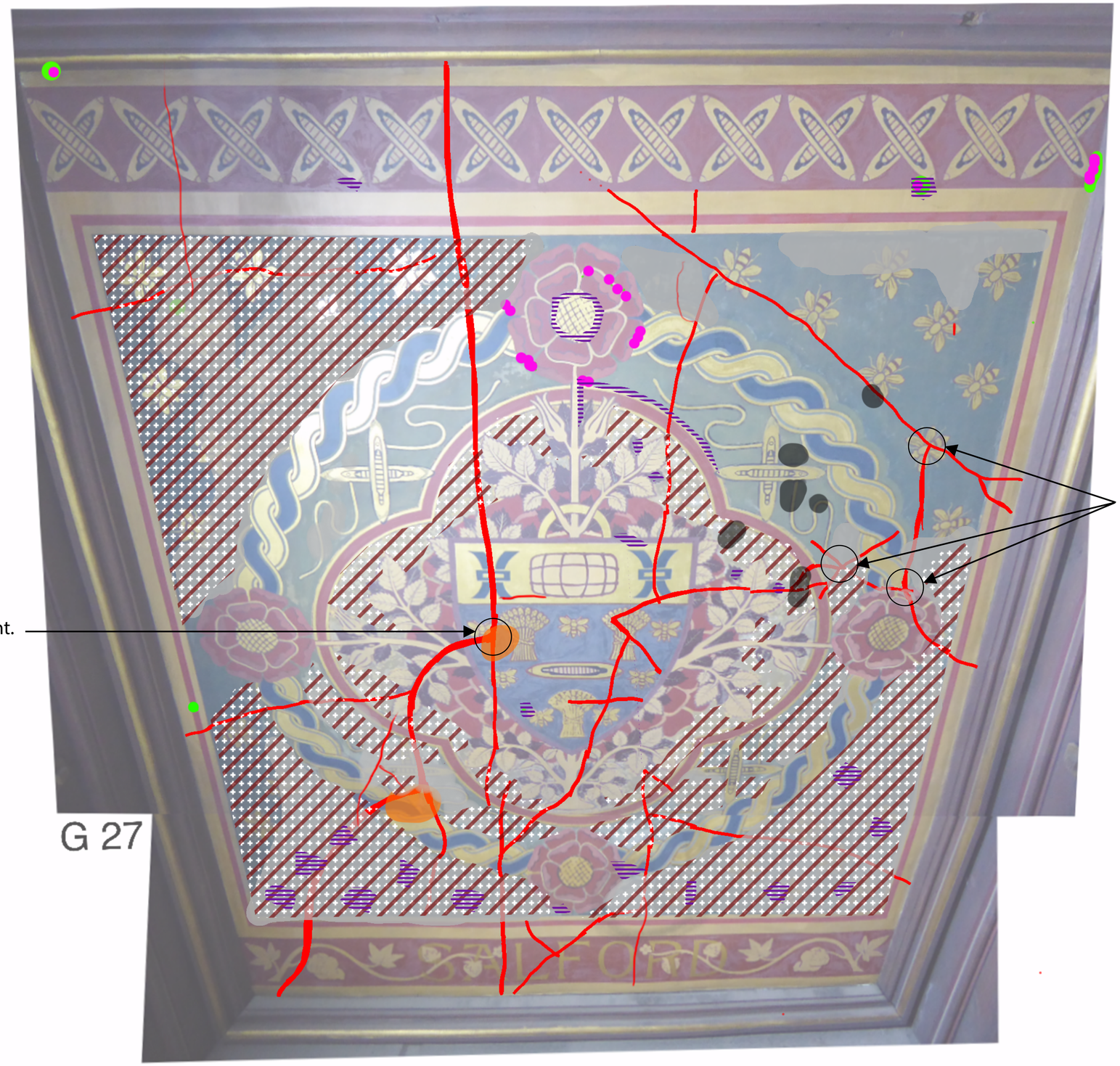
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Manchester Town Hall

G27- Salford - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

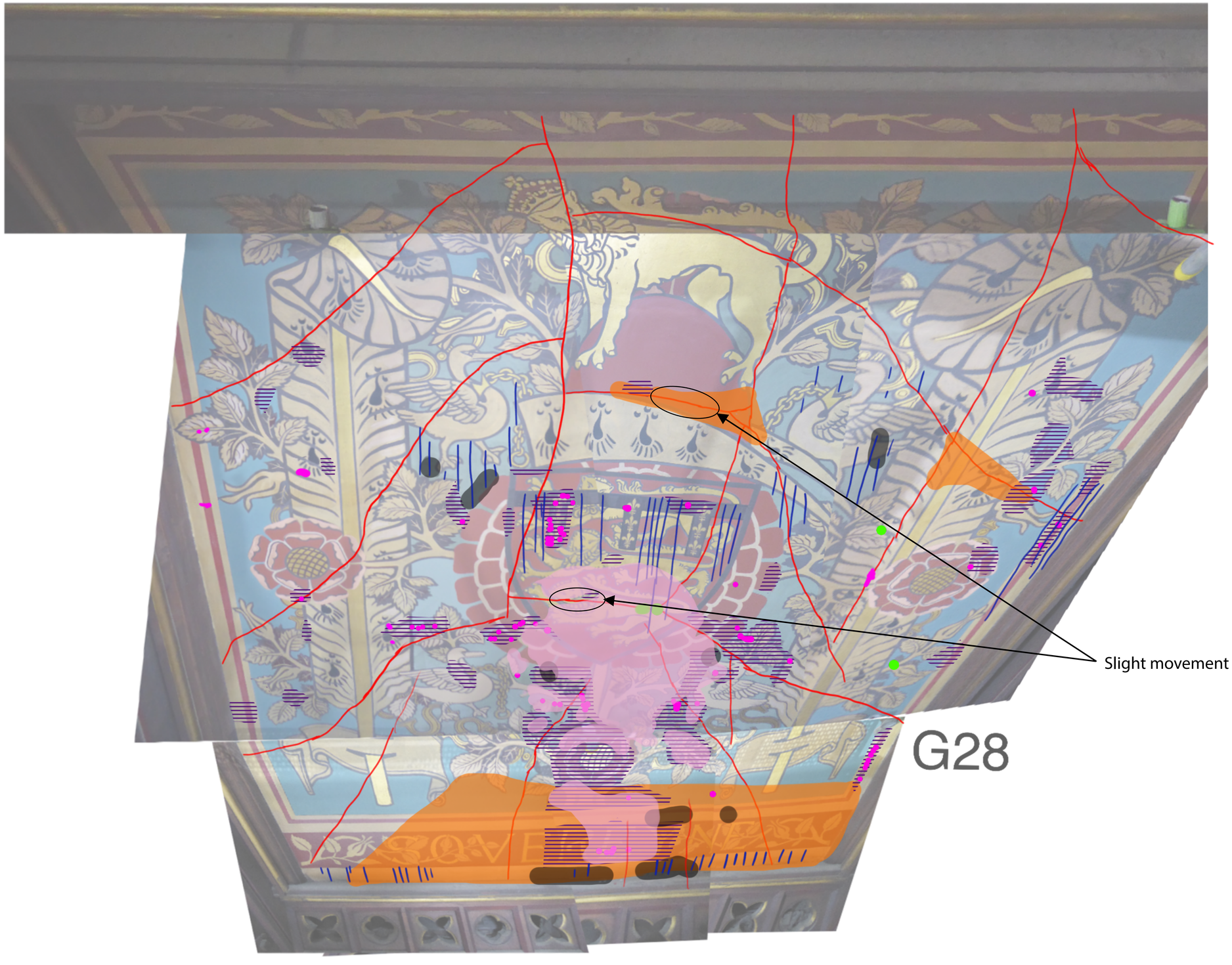
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G28 - Sovereyne (LL) - Sketch 1

2022



Key

- Fractures:
- Unstable Fractures:
- Hollow Plaster:
- Unstable Moving Plaster:
- Plaster Repair:
- Plaster Loss:
- Mechanical Impact (shotgun holes):
- Flaking Paint:
- Powdering Paint:
- Salts:
- Blanching:
- Water Runs:
- Solvent Damage:
- Overpaint:
- Overpaint over Overpaint:
- Surface Accretions:
- Gilding Previously Cleaned:
- Paint Loss:

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