Condition Assessment

Site	Sacred Heart High School, Hammersmith, W6
Listing	Grade II*, 1192062
Object	Cloister Paintings
Material	Paint (oil) on plaster
Artist	Mother Mary Maycock, 1902-3 or 1906-7
Size	Approximately 130m length x 3 m
Size	1-2 February 2023

Report prepared March 2023

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1. Summary

This report documents the findings of a two-day on-site inspection carried out by Opus Conservation for Scared Heart Secondary School, Hammersmith. If provides some basic background, building and painting information, and then presents a detailed condition assessment of the whole scheme.

This is followed by some discussion of the condition. Overall the condition of the paintings is good (stable), although their appearance is compromised by yellowed varnish, scuff marks and a spotting phenomenon that may be related to original technology. Some scenes exhibit flaking which requires consolidation to prevent further loss. There are other less-widespread types of deterioration / damage noted in the report and visual glossary.

Finally, recommendations for addressing these phenomena are presented at the end of the report. These include monitoring proposals, further investigations, remedial treatment recommendations (including a trial scene) and preventive measures.

The conditions encountered were defined and photographically illustrated (see "Visual Glossary" on Page 13 .

The entire scheme was documented and the images are presented in "Wall Painting Scheme" on Page 25 .

Lastly IR imaging improved the legibility of the inscriptions at the base of some of the panels (see "Ultraviolet Fluorescence (UVF) and IR Images" on Page 21)

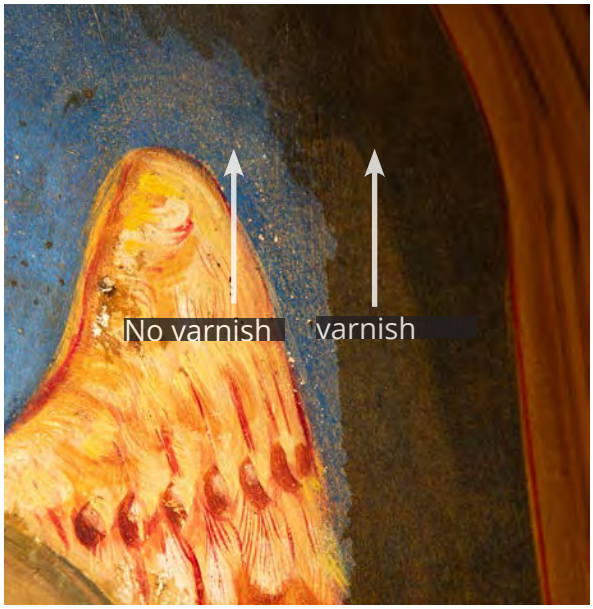

Fig.1 Yellowing and darkening caused by the varnish can be seen clearly where it has been removed and where it remains. The area to the right is blue under the varnish.

Fig.2 A closer detail showing how the varnish is effecting the appearance of the paintings. Where it is lost the true colour can be seen.

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2. Background and scope

Opus Conservation were invited by Alexandra Dijkhuis and Yousaf Khan to carry out a condition assessment of the cloister wall paintings at Sacred Heart High School. The scope of the assessment by Opus Conservation was to:

1. Check the condition of the paintings, with photographic documentation to identify, define and record damage and deterioration. The assessment included visual inspection with normal and raking light, non-invasive microscopy, and UV fluorescence and IR reflected imaging.
2. A fully illustrated report detailing the findings of the assessment (this report). The report will include comments on significance and any recommendations or next steps for the conservation and protection of the paintings.

3. Building and painting location.

The complex was built as a seminary from 1869 onwards by John Francis Bentley. It is built of red brick with Oulton stone- dressings and tiled roofs. It is Free Tudor style, three storeyed buildings, incorporating three sides of cloistered courtyard. The chapel to the South East was built in 1883, again by J. F. Bentley[1].

The Society of the Sacred Heart moved into the site in 1893 and established a school[2].

4. Style and technology

The paintings are said to be by Mother Mary Maycock[3], although whether she was the creative drive or actual painter is unclear. They were painted in the first decade of the twentieth century. They are figurative scenes from the Life of Jesus (some of which were copied from well-known 15th century paintings by Fra Angelico), within painted frames and architectural detailing. The top and bottom of the wall, and between scenes, is fictive marble decoration (Fig.4).

The Life of Jesus cycle is perhaps unusual for a school setting. Mary Sargant-Florence's murals at Oakham Old School, Rutland (begun 1902) illustrate Tennyson's Idylls of the King. J. M. Staniforth's at Howell's School for Girls, Llandaff, Cardiff (1904) depict Shakespearean scenes. And the paintings at Queen Elizabeth's Grammar School for Girls, Mansfield (attributed to Morris & Co., 1908-23) were of Classical legends symbolizing the quest for knowledge[4]. These themes seem especially suited to a

1 https://historicengland.org.uk/listing/the-list/list-entry/1192062?section=official-list-entry

2 https://www.sacredhearthigh.org.uk/page/?title=Our+History+%2D+180+years&pid=30

3 https://www.sacredhearthigh.org.uk/page/?title=Our+History&pid=30

4 Examples taken from Willsdon 2000: 398.

school setting, but the Life of Christ scheme at Hammersmith reflects the religious foundation of the building and school, and the interests of Mother Mary Maycock. One interesting parallel for Hammersmith comes from the firm Hardman & Co., who painted '2 paintings, subjects Our Lady, Eve' for the High School for Girls at 6 Upper Baker St. London in 1886[5]. This choice of female subject matter for a girls' school echoes the paintings at Hammersmith: the Hammersmith cycle features two very similar scenes of the women at the tomb; one with the door open to the tomb, and a second with no body inside the tomb. Hammersmith is, of course, a much more extensive scheme than the Hardman parallel, extending as it does round 130m of corridor. It is significant for its scale and apposite subject matter (Fig.4).

Visual examination suggests the support is plaster, with a white ground applied everywhere, possibly a yellowish sealant, and an oil-bound[6] paint layer. There is some gold detailing, for example on halos. The somewhat different appearance of the paintings in the bottom c. 1.15 m of the wall may be due to a different substrate in this dado section of the wall (Fig.14).

There appear to be at least two varnishes on the paintings, which are now darkened and give a yellow cast to the paintings. It is not clear if the paintings were varnished from the very beginning (i.e. it is part of the original technology), or if the varnish(es) is a later addition (Fig.8).

No analysis of the plaster or paint was done as part of this inspection. Small samples of varnish were taken for FTIR analysis and solubility trials. See section 6.1 for more details.

5. Condition

The paintings were inspected on 1st and 2nd February 2023, by Samuel Whittaker and Dr Elizabeth Woolley ACR. Inspection was from the ground and ladders, using normal and UV light, and some in-situ microscopy.

The various conditions are described with word and image in the appended Visual Glossary (8. Visual Glossary on Page.13).

5.1. Plaster

The condition of the plaster support was found to be stable. As mentioned above, the somewhat different appearance of the paintings in the bottom c. 1.15 m of the wall may be due to a different **substrate texture** in this dado section of the wall (Fig.14).

There are a few open **cracks** with dirt in, indicating they are not newly developed

5 Hardman archive done as part of the author's PhD research. This scheme and building are no longer extant.

6 Oil is assumed as the medium, but there has been no analytical confirmation of this.

(Fig.12. on Page.13). There are a few **plaster losses** such as chips or gouges, consistent with accidental knocks to be expected given the paintings' location in a busy thoroughfare (Fig.12. on Page.13). There are occasional drill holes into the painting, presumably for wiring or other hardware.

Recommendation: fill deep or unstable losses with a compatible plaster. Tone to disguise.

5.2. Paint layers

The paint was stable for the most part, although there are localised areas of **flaking** and **blistering**, as described in the table (Fig.10-9).

Recommendation: stabilise flaking paint using a compatible adhesive. Tone losses.

Some paint has **been thinned or lost** completely, more notably red modelling on the gilded halos. This may be the result of previous cleaning efforts (Fig.21).

Recommendation: do not reinstate this type of loss.

Craquelure is common across the painting, varying in size from extremely small, to palm-sized 'islands' (as under the Last supper scene) (Fig.22). Craquelure can be the result of paint drying or ageing. Generally, it does not compromise the stability of the painting, so it is not addressed during conservation. In places the first varnish may have exacerbated the craquelure, and it certainly makes it more conspicuous as later varnishes are retained in the gaps between the paint.

Recommendation: adapt varnish reduction in areas of craquelure. Consider disguising intractable dark lines.

Almost all the paintings display a degree of **spotting**, some much more pronounced than others (Fig.5). This could be technology related, as certain paint passages seem more effected than others. Where the varnish has been removed it is clear the spots remain, and are even more visible against brighter paint. In some places the spots have been abraded away, leaving a bright spot. The cause of these spots is unclear, and further investigations as to their nature would be useful in designing a conservation treatment for them.

Recommendation: sample and analysis with SEM-EDS or FTIR.

5.3. Varnish

The paintings have been varnished at least twice. These are now yellowed and darkened, significantly effecting the appearance of the paintings. The varnish has been removed in selected areas, sometimes mechanically but more commonly by solvent. This removal is often targeted at key iconographic faces and figures. The effect of this is

to brighten particular areas in comparison to the surrounding scene (Fig.8).

The varnish has also been damaged by abrasion from people walking the corridors (see 4.5 Other below)

> *Recommendation: Make varnish reduction trials, considering H&S implications of solvents.*

5.4. Surface phenomena

The surface of the painting is **dusty** (Fig.30), with some surface deposits, **splashes** and **smears**, (Fig.29) as recorded in the table. This is unsurprising given the high-traffic levels of the cloister. There are also some water runs evident, especially high up on the wall, which may be the result of previous leaks or condensation.

> *Recommendation: Dust all paintings. Remove splashes and runs using dry or wet methods, depending on their responsiveness.*

5.5. Other

There are many **scratches and scuffs** at approximate torso-height on the paintings, probably the result of furniture and bags banging against the wall (Fig.4). In some cases, the paint layer is undamaged underneath these scuffs, indicating the varnish is doing its protective job. If the varnish were to be reduced in future conservation works, a new varnish application should be considered. A physical barrier to keep people and furniture away from the paintings could also be considered, although it would narrow the thoroughfare.

Historical repairs along cracks have been repainted. Inspection with a UV torch revealed that there is a fair amount of repainting across the paintings (Fig.34).

> *Recommendation: Make varnish reduction and reactivation trials to see if this reduces the visual impact of the scratches and scuffs. Repaint damaged areas of the painting once decisions regarding the treatment of the varnish layers have been taken.*

6. Condition discussion

It is worth considering the distribution of the conditions noted. Key condition phenomena which could be addressed by remedial conservation are mapped on a floor plan, below. This indicates the relative prevalence of each phenomenon, with lighter or darker shades of each colour indicating lesser or greater prevalence of each phenomenon. *All* the paintings have small amount of repaint, lots of dust, and a thick varnish (or varnishes), therefore these phenomena are not noted on the floor plan.

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Some broad trends can be seen:

- Scratches are widespread, but heaviest on the north wall of the cloisters;
- Surface accretions are most prevalent on the west wall, perhaps because this area is used for seating during lunch breaks;
- Water runs mainly affect the east wall;
- Spotting is found on most paintings, with no trends in distribution, although the NW lobby paintings are much spottier.

In addition to noting the presence or absence of the different condition phenomena, each scene was also given a score 1-4 for condition and treatment priority. Scenes scored 4 are in most urgent need of conservation, and would be prioritised in any partial treatment. The definition of each score is given in the table below.

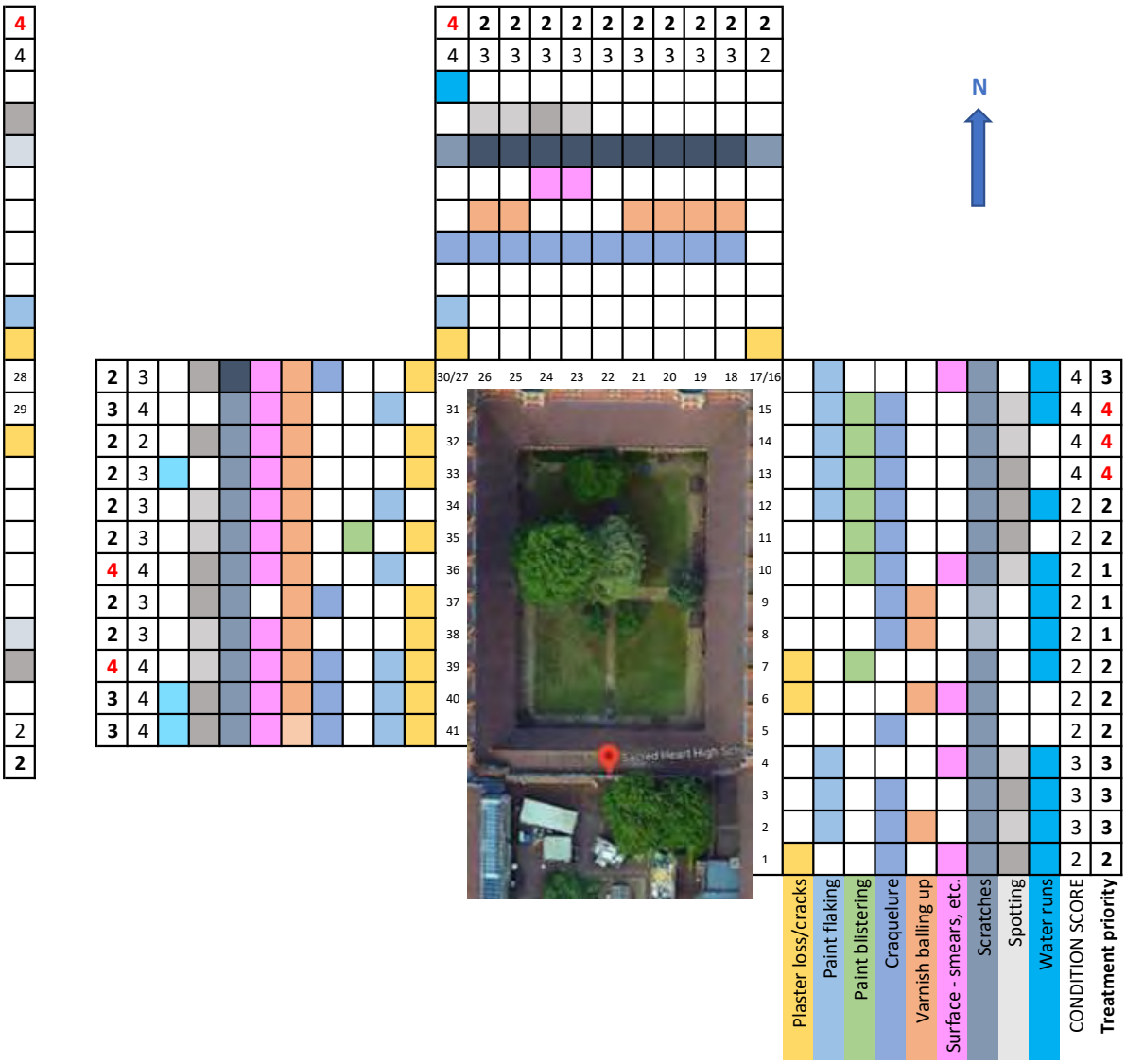

Fig.3 Floor plan of the cloisters with distribution and severity of condition marked.

Condition score	
1	excellent, no conservation treatment required
2	stable, aesthetic improvement possible with treatment
3	unstable due to damage (e.g. impact, scratching)
4	unstable due to deterioration (e.g. damp, salt efflorescence)
Treatment priority score	
1	No treatment required
2	Lowest priority as painting is stable – aesthetic improvement only
3	Mid priority – painting requires stabilisation but vulnerable areas unlikely to be disturbed in normal use of space
4	Highest priority – risk of immediate loss / damage if not addressed.

Overall the condition of the paintings is good. However, 15 of the 41 scenes exhibit some flaking (pastel blue in the map above), which requires consolidation to prevent further loss. Besides the flaking, the condition of the paintings is characterised by three main phenomena:

- damage from passers-by abrading the surface;
- the overall yellow darkened appearance due to the varnish layers, and;
- areas of spotting.

Please see "Remedial treatment recommendations" on Page 9 .

6.1. Analysis – varnish samples

Solid samples (flakes) of varnish were taken from scenes on the east, north and west walls, and from some of the decorative marbling on the north wall. These samples were analysed by FTIR-ATR, which supported the theory that there are at least two varnishes as each side gave distinct spectra. At least one of the varnishes appears to be an oil/ resin(shellac?)/wax mix.

Samples from the Last Supper scene on the north wall were also left in different solvents for an hour to see if they dissolved. Results are described below.

Solvent	**Observation – up to 1 hour later**
Acetone	*Immediately* solubilised the sample / remained in solution
IMS	Partially soluble – yellow liquid with solid particles
Propan-1-ol	Completely solubilised after 1 hour
Propan-2-ol	Partially soluble – yellow liquid with solid particles
Methoxy propanol	Completely solubilised after 1 hour
Benzyl alcohol	Completely solubilised after 1 hour
White spirit	No effect

7. Recommendations

7.1. Monitoring proposal

The conservators think the rate of change in these paintings is slow. This could be confirmed through repeat photography of flaking areas, to compare frames and see if paint loss is ongoing, and if so at what rate. We would recommend repeat photography one year hence, and opportunistically whenever revisiting site.

7.2. Further investigations

Small samples of paint removed from the painting can be used to understand the broad technology of the scheme. This is useful for conservation, especially to detect the presence of zinc pigments (which has implication for use of water in treatment) and to better understand the spotting phenomenon which may be the result of discoloured metal soaps[7]. Samples are the size of a pin head, and are taken with a scalpel. We suggest taking six samples from the following locations:

- Lobby spots
- Lobby no spots
- Lobby below dado
- Main cloisters spots
- Main cloisters no spots
- Main cloisters below dado

7.3. Remedial treatment recommendations

As an initial step we would recommend a trial phase to conserve one scene completely, including all the specific treatment recommendations outlined in Section 4, Condition. This could be used as an example of what could be achieved across the whole scheme, as well as a useful costing exercise. It may be helpful for engaging stakeholders and raising funds in the future.

The scene for such a trial should be selected carefully – The Nativity scene in the SE corner of the cloisters is somewhat separated from the scheme by its location in a niche, marking it as a discreet and discrete candidate for testing. It has the ubiquitous varnish and scratches which would be the main work in any major conservation. If significant time elapses between the trial and full conservation, this scene has the

7 The phenomenon looks similar to one described in this paper: Burnstock, A., M. Cross, and K. Serres. 2017. 'Insoluble surface spots, metal soaps and challenges in the conservation of Goya's Portrait of Francisco de Saavedra'. In *ICOM-CC 18th Triennial Conference Preprints, Copenhagen, 4–8 September 2017*, ed. J. Bridgland, art. 1301. Paris: International Council of Museums

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benefit of being relatively inconspicuous.

Areas for treatment trials for conditions not found on The Nativity scene (for example, flaking, spotting) would need to be identified and agreed with the client. These localised trials could be run alongside conservation of the single Nativity scene. The trial phase would therefore be an opportunity to:

- Monitor and design a treatment for flaking, especially in the NW lobby. Do fixing trials on planar and curled flakes, to establish the methodology which would be used in a full-scale conservation treatment.
- Address the degraded varnish. Can the varnish be solubilised or reactivated, with which solvents? What is the condition of the paint underneath the knocks?
- Establish how evenly the brown craquelure can be cleaned – previous cleaning efforts encountered problems with this.
- Consider the approach to spotting, which is found throughout the scheme.
- Cost conservation of the whole scheme.

7.4. Preventive measures

The main risk to the paintings is accidental impact damage. The risk could be minimised by moving display boards and any other unnecessary furniture out of the cloisters. There is also a case for installing a physical barrier to keep passers-by a safe distance from the paintings. The design would need to be carefully considered:

- It will narrow the thoroughfare;
- It should not appear as a shelf or seat which might risk greater damage through inappropriate use;
- It should not obscure the paintings;
- It should be aesthetically sensitive to the architectural and artistic context of the cloisters.

Fig.4 View of the north corridor where damage from passers-by is most evident.

Fig.5 Detail of an area of spotting.

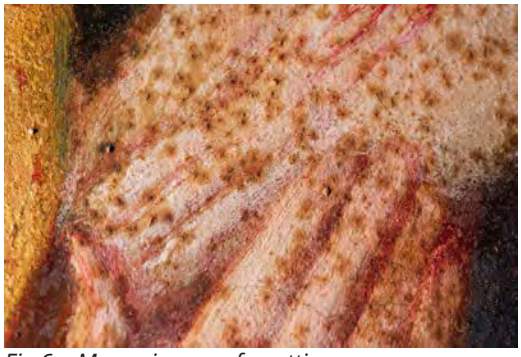

Fig.6 Macro image of spotting.

Fig.7 Micrograph of a spot.

Fig.8 View of a scene partially cleaned. The dark blue area has not been cleaned whilst the lighter blue directly around the angel has.

Fig.9 Macro image showing where the varnish has been lost the colour of the paintings below is dramatically brighter and less yellow.

Fig.10 Detail of the east wall where blistering and flaking paint is concentrated. It would appear this is due to a localised cause. Possibly water infiltration.

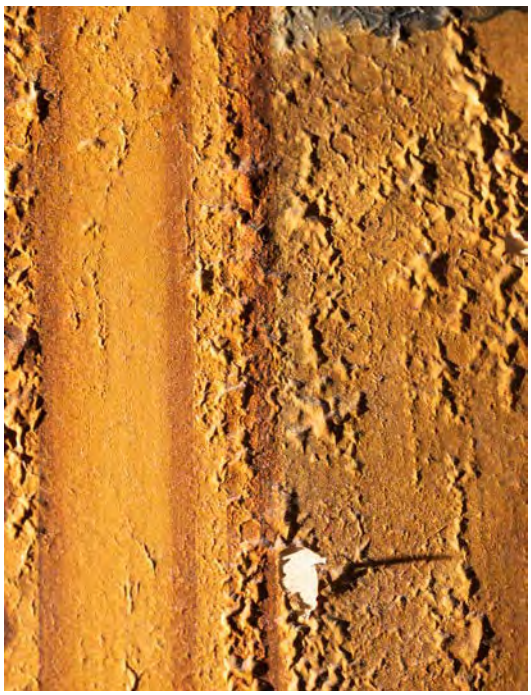

Fig.11 Detail of area marked in image to the left.

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8. Visual Glossary

Plaster Loss

Part of or all the plaster or stone is missing.

For example: as a result of an accidental gauge.

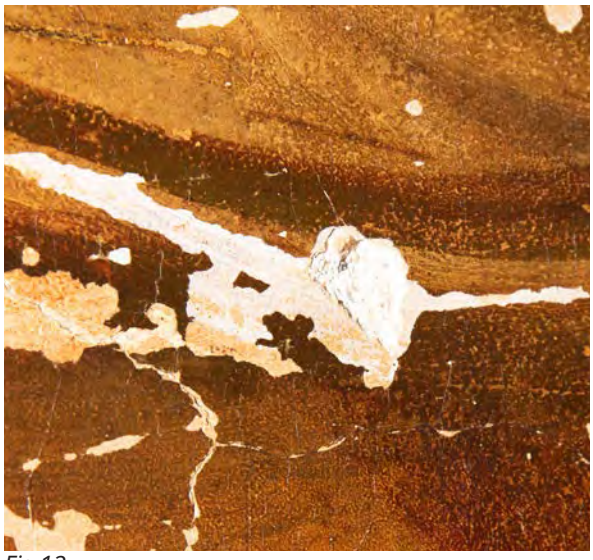

Fig.12

Crack

An open fissure in the substrate of a painting. May or may not have associated loss.

Fig.13 .

Substrate texture

Different substrate at dado level contributes to different optical appearance from above.

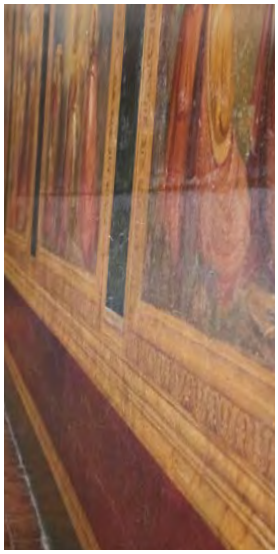

Fig.14 .

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Paint layer phenomena

Flaking - large

Flaking is the separation of small, thin pieces of material or coating from its substrate (AIC).

At Sacred Heart there are large flakes (order of cm's) where de-lamination is between plaster/prep on dark marbling.

Image: Area of large flakes at top of the wall.

Fig.15 .

Flaking - varied size

Flaking is the separation of small, thin pieces of material or coating from its substrate (AIC).

At Sacred Heart flakes vary in size down to micro-flakes. Often this is associated with blistering (see below)

Image: Area of flaking association with blistering

Fig.16 .

Blistering

A raised, convex area or bubble on the surface of an object, often between adjoining layers of different material (AIC).

At Sacred Heart blistering is concentrated to the east wall suggesting a localised cause (for example water ingress)

Image: Area of blistering on east wall

Fig.17 .

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Creasing

Differentiated from craquelure as raised lines in the painting without any hairline crack.

Fig.18 .

Paint Loss

Part of the paint layer is missing. Associated with flaking or blistering.

Fig.19 .

Paint Loss

Part of the paint layer is missing. Associated with scrapes / knocks from passers-by.

Fig.20 .

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Paint Loss

Part of the paint layer is missing. Loss of the red modelling.

Image: Christ's cross halo in red has gone.

Fig.21 .

Craquelure - fine

'A network of fine minor cracks specific to secco paint layers. It is caused by ageing, technical errors or by the differential movement of the coating (e.g. paint layer, varnish) and the substrate' (EWA Gloss).

At Sacred Heart they go from fingernails size to very large islands.

Image: example of the finer network of cracks.

Fig.22 .

Craquelure - large

A network of larger cracks.

Image: example of the larger network of cracks.

Fig.23 .

Varnish layers

Yellowing/ darkening

Deterioration of the varnish layer where it yellows and reduces in opacity over time changing the colour and legibility of the painting

Image: The yellowed and darkened appearance of the paintings is apparent in the robes where vertical patches are a result in changes in the appearance of the varnish layer.

Fig.24 .

Balling

Small darkened and slightly raised areas of the varnish.

Fig.25 .

Varnish reduction (solvent)

Where the thickness of the varnish has been reduced or removed with the use of solvents.

Image: The area appears brighter and less yellowed than the untouched surround.

Fig.26 .

Varnish layers continued

Varnish reduction (mechanical)

Where the thickness of the varnish has been reduced or removed by mechanical means.

Image: The profile of the face has had the varnish layer removed revealing the brighter cleaner paint layers beneath.

Fig.27 .

Distrupted/ lifted varnish

The varnish has been knocked and abraded causing scratches, loss or de-lamination. This has resulted a confused messy appearance to the painting.

Fig.28 .

Surface

Splash marks

Black and brown splash marks.

Fig.29 .

Surface continued

Dust

Superficial layer of particulate matter.

Fig.30 .

Water runs

Fig.31 .

Other

Spotting

Small dark spots on the painting. Slightly raised.

Fig.32 .

Other continued

Repaint

Areas of damage of loss that has been restored. Often distinguishable due to difference in texture, quality or colour to the surround

Fig.33 .

9. Ultraviolet Fluorescence (UVF) and IR Images

Fig.34 .

Visible image of are imaged in UV to right

UVF image shows blue/ green fluorescence caused by the presence of the varnish. Dark spots not related to composition are areas of repainting.

Fig.35 .

Visible image of are imaged in UV to right

UVF image shows blue/ green fluorescence caused by the presence of the varnish. The area where the varnish has been removed is darker and more contrasted due to absence of fluorescing varnish.

Ultraviolet Fluorescence Images (UVF) continued

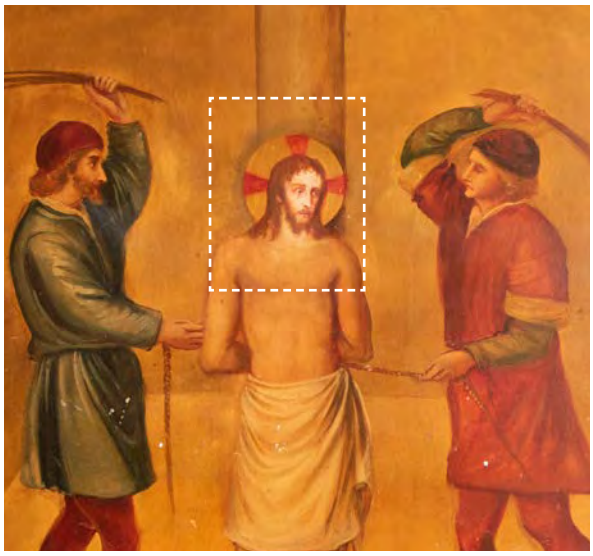

Fig.36 .

Visible image of are imaged in UV to right

UVF image shows blue/ green fluorescence caused by the presence of the varnish. Dark spots not related to composition are areas of repainting.

Infrared reflected image

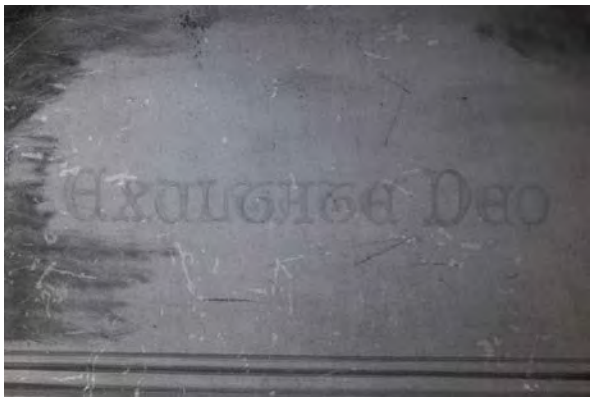

Fig.37 .

Visible image of are imaged in IR to right

IR cuts through the obscuring varnish layers to better reveal the inscription.

Infrared reflected image continued

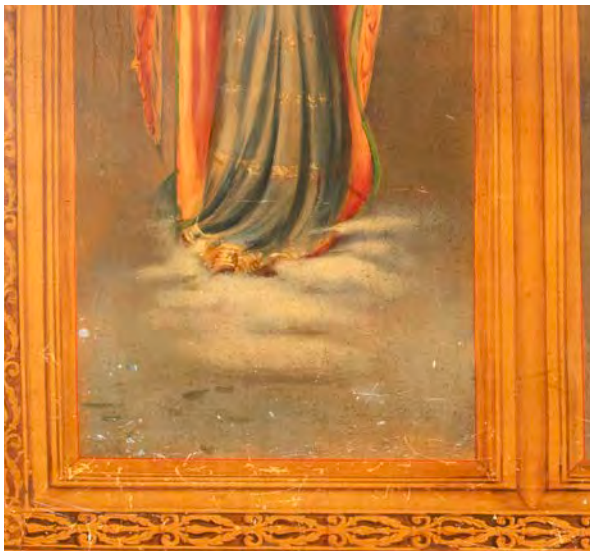

Fig.38 .

Visible image of are imaged in IR to right

IR cuts through the obscuring varnish layers to better reveal the inscription.

Fig.39 .

Visible image of are imaged in IR to right

IR cuts through the obscuring varnish layers to better reveal the inscription.

Infrared reflected image continued

Fig.40 .

Visible image of are imaged in IR to right

IR cuts through the obscuring varnish layers to better reveal the inscription.

Fig.41 .

Visible image of are imaged in IR to right

IR cuts through the obscuring varnish layers to better reveal the inscription.

10. Wall Painting Scheme

Fig.42 .

Fig.43 .

Fig.44 .

Wall Painting Scheme continued

Fig.45 .

Fig.46 .

Fig.47 .

Wall Painting Scheme continued

Fig.48 .

Fig.49 .

Fig.50 .

Wall Painting Scheme continued

Fig.51 .

Fig.52 .

Fig.53 .

Wall Painting Scheme continued

Fig.54 .

Fig.55 .

Fig.56 .

Wall Painting Scheme continued

Fig.57 .

Fig.58 .

Fig.59 .

Wall Painting Scheme continued

Fig.60 .

Fig.61 .

Fig.62 .

Wall Painting Scheme continued

Fig.63 .

Fig.64 .

Fig.65 .

Wall Painting Scheme continued

Fig.66 .

Fig.67 .

Fig.68 .

Wall Painting Scheme continued

Fig.69 .

Fig.70 .

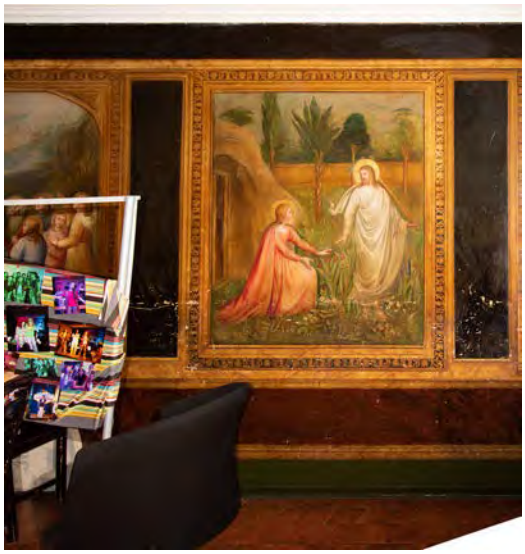

Fig.71 .

Wall Painting Scheme continued

Fig.72 .

Fig.73 .

Fig.74 .

Wall Painting Scheme continued

Fig.75 .

Fig.76 .

Fig.77 .

Wall Painting Scheme continued

Fig.78 .

Fig.79 .