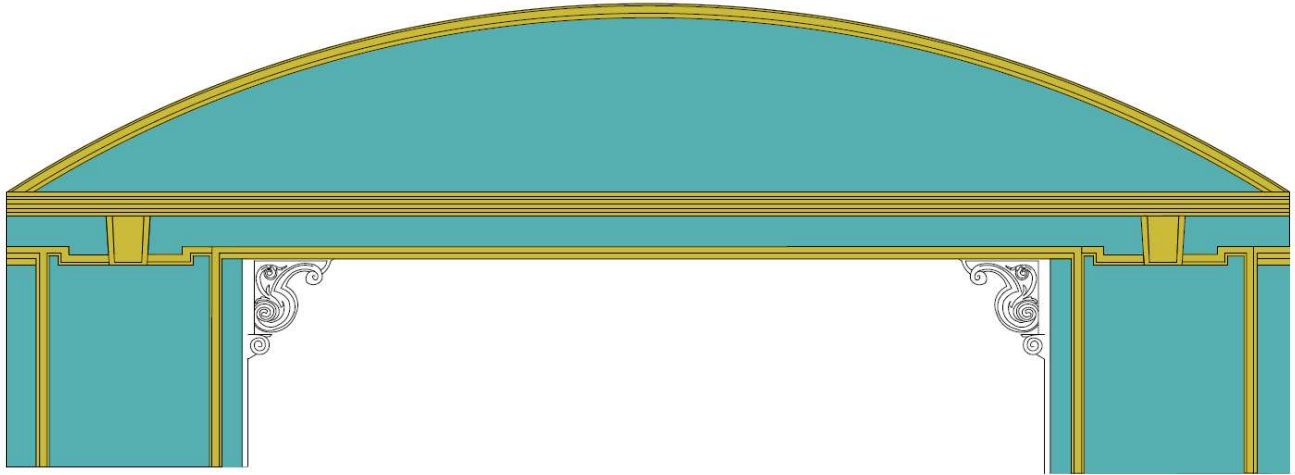


Prescot Picture House
8-14 Kemble Street, Prescot



**Investigations into the condition of the historic ceiling and
wall plasters within the main auditorium space**

December 2022

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Introduction

To allow detailed proposals to be developed for the refurbishment of the Prescott Picture House, Knowsley MBC have requested a survey to identify the condition of the ceiling plasters within the main auditorium space. This report, upon the request of the Council, sets out the results of surveys that have been undertaken over a two-week period, finishing on the 22nd of December 2022. The report will identify: -The location of the required repairs, a full schedule of emergency and permanent required plaster repairs, and an outline of the costs for these works.

A Brief History of the Auditorium

The auditorium was built in 1912 and modified with the insertion of balconies, to increase the capacity, soon after its opening. The barrel vaulted ceiling is decorated with fibrous plaster ribs ,under lightweight steel trusses, which spring off pilasters on the walls below, and is also decorated with ceiling panel moulding. This same design could also be found at the main hall within Kedleston Road training centre, in Derby, which is dated 1915, and closer to Prescott at the following Picture Houses: Liverpool Picture House, Clayton Square, Liverpool, built in 1912; The Empress Picture House, West Derby Road, Tuebrook, dated 1915; the Tracadero, Camden Street, Liverpool centre, 1922; the Grosvenor Picture House, Stanley Road, Kirkdale, also dated 1922; and finally at the much grander Astoria, Walton Road, Walton, dated 1930.

The pilasters at the Prescott Picture house may have not extended below the balconies, but above broke through a plaster frieze band and frieze. With the blank upper arcading, below the frieze band, between the pilasters, decorated with fibrous plaster swags, where there were not window openings, and were there were windows they are surrounded by mouldings, although the lower parts were lost with the balcony

removal in the early 1990's. The beauty of the whole depended on the balconies, rich paint decoration, including bands of gold and plush furnishings.

The Structure Supporting The Ceiling

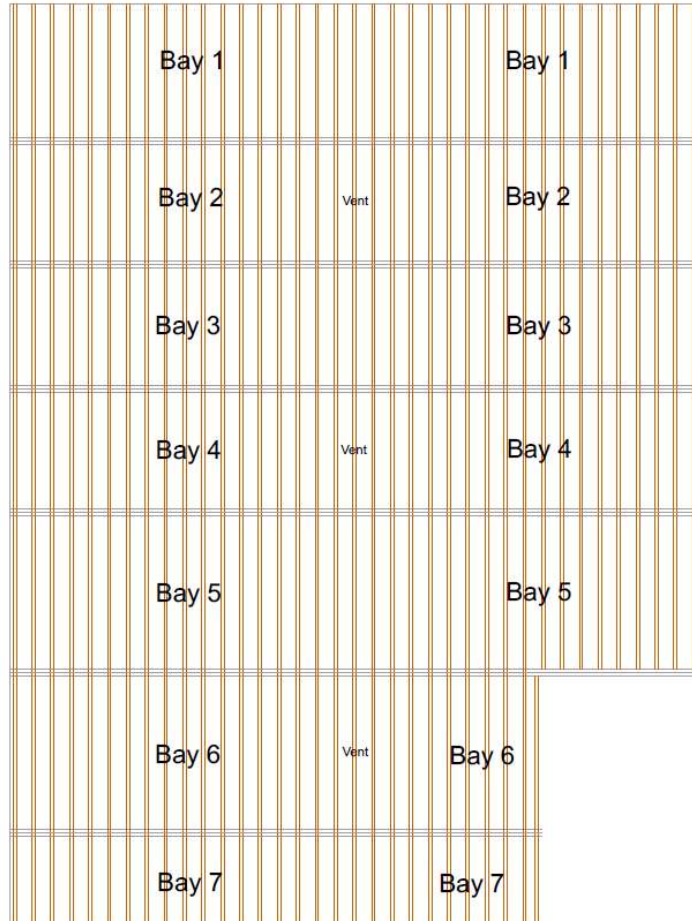


Diagram 1: The location of the steel trusses, in grey, and the ceiling joists in brown, which support the ceiling below.

The barrel vaulted ceiling, see photos 1 & 2 below, has circular Guilloche patterned, principal ribs, edged with egg and dart decoration, that span the width of the ceiling, and it is further broken up by panel moulding. These together with circular ceiling wreaths and ventilation grills decorate the main auditorium space, part of which previously open beyond the more recent partition at the back. The whole fibrous plaster ceiling, is supported by lightweight fabricated iron trusses, see photos 3 and 4 below, which also support an earlier mechanical ventilation system.

Running along the length of the ceiling and supported off the tie beams of the steel trusses are substantial ceiling joists, see photos 5 & 6. These ceiling joists sit upon the bottom member of the trusses and at both ends of the auditorium in pockets formed in the brickwork. Hung off the ceiling trusses are fibrous cast plain panels, which are just nailed on from below. The trusses also carry by unwired fibrous wads, the decorative ceiling ribs which hang directly below them, see photos 7 & 8. Whilst generally the ceiling joists are in good

condition there is some localised signs of rot, see photo 9, and occasionally a lack of bearing on the lower members of the trusses.

The Barrel Vaulted Ceiling and the East and West Walls

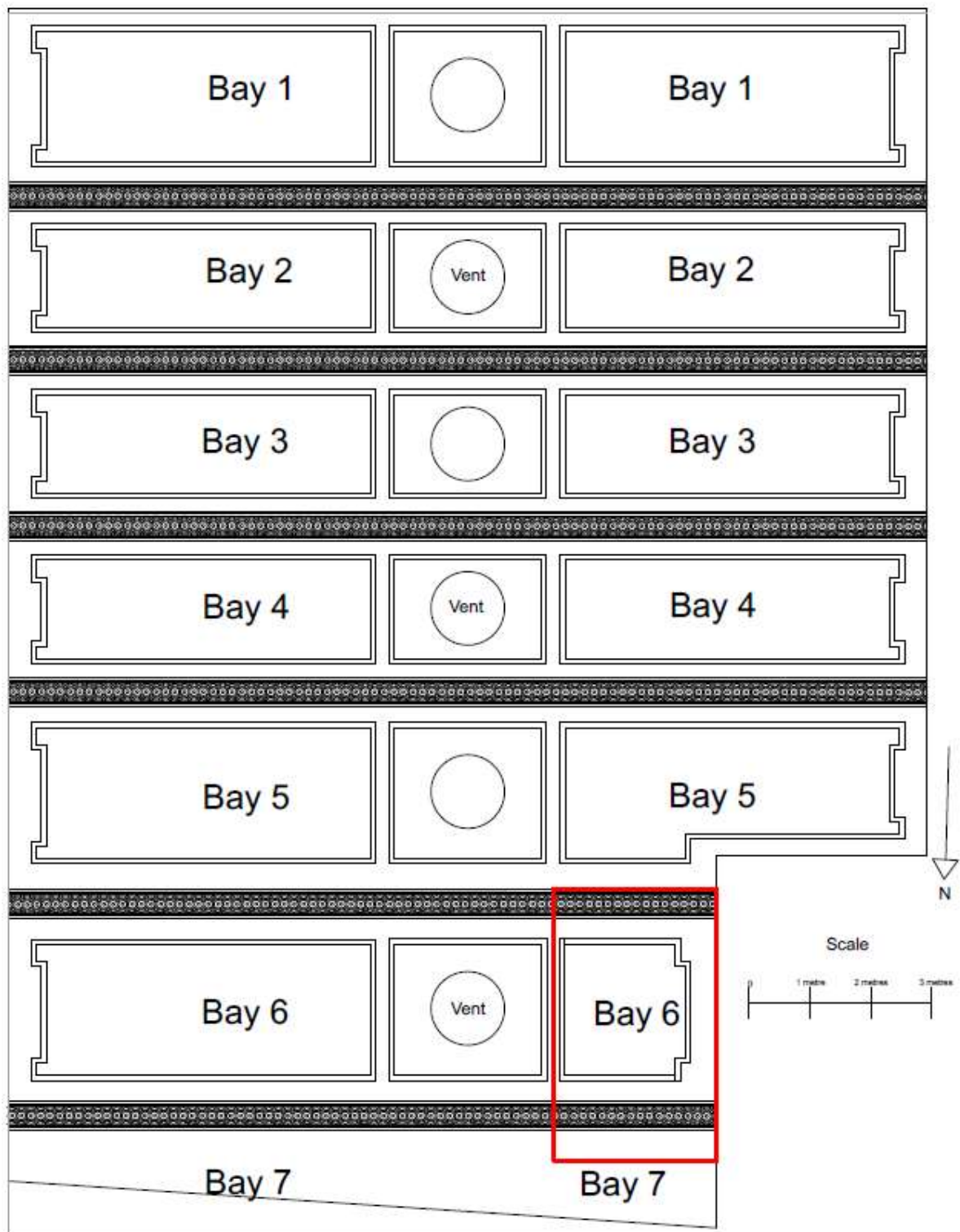


Diagram 2: An opened out plan of the barrel vaulted ceiling, showing the bays, ribs, and panel moulds.

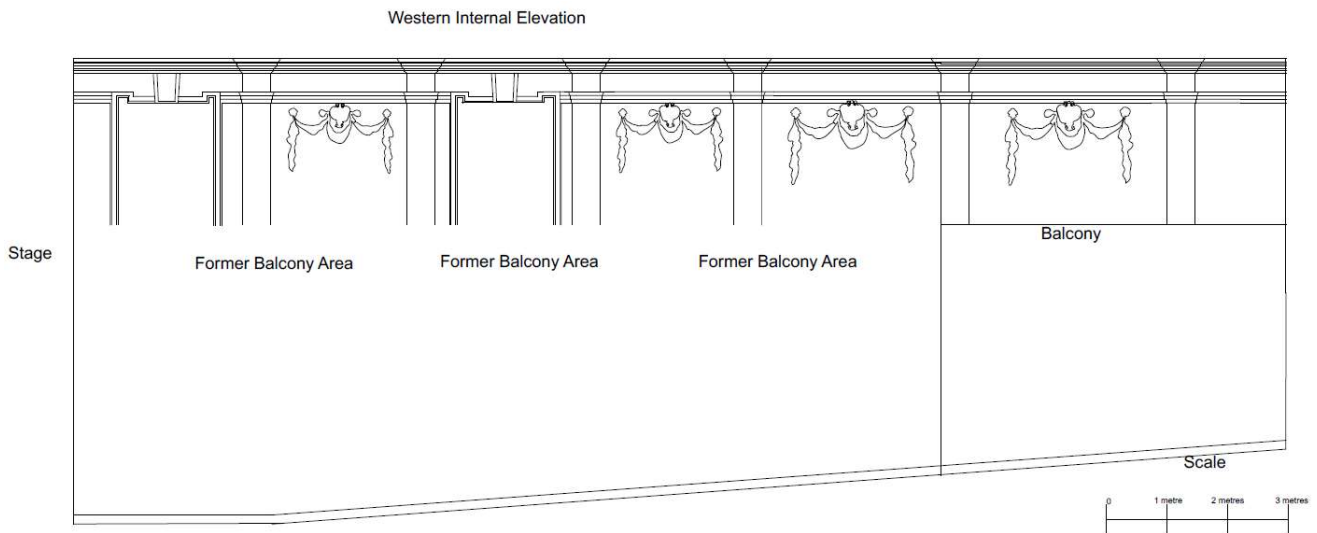
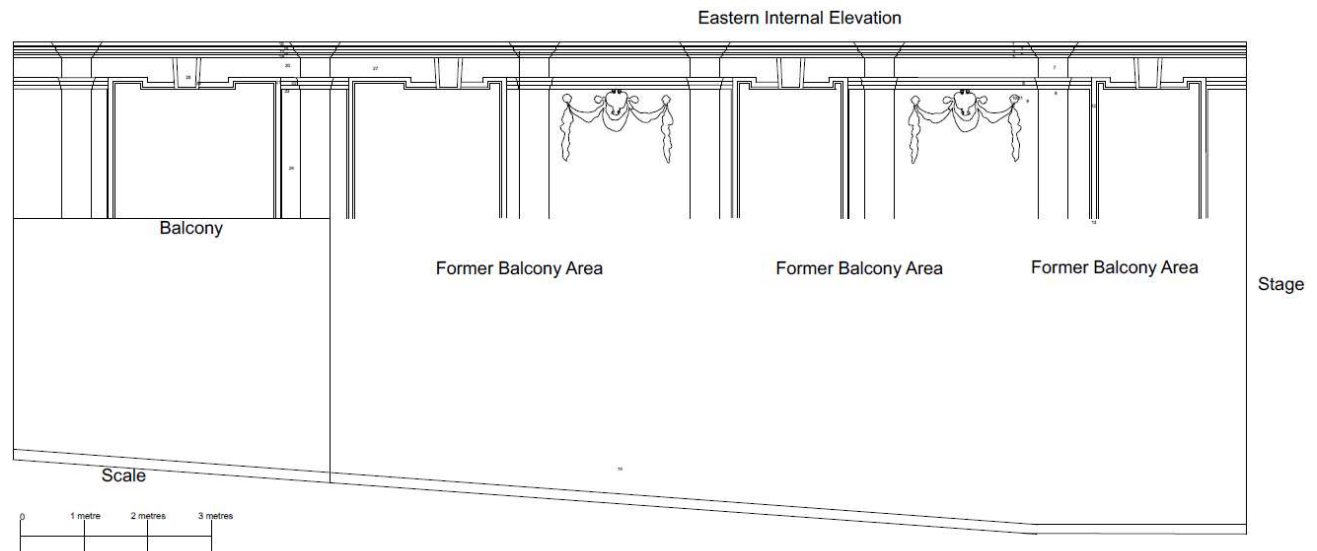


Diagram 3: The remaining original plasterwork on the east and west walls, with everything below the former balcony level over skimmed with modern plasters, and all the decorative detail below this line, including the pilasters, have been applied when the space was converted for church use in the early 1990's.

Unfortunately, the cement lime bound wall plasters, and the fibrous cast ceiling, and most of the decorative plasterwork is in an extremely poor condition, as a results of a massive bird infestation in the roof space and water penetrating the ceiling and walls. The fibrous cast plaster plain ceiling panels are cracked and have exposed hessian and laths, from within the casts, visible after the deterioration of the upper surfaces, see photos 61-65. Broken cast panels in the centre of the first bay expose the nature of the fibrous cast panel and its over skim, see photos 26 & 27.

In the first bay nearest the stage, see diagram 2 above, the ceiling is badly cracked where it meets the front of the proscenium arch; and parts of the first fibrous rib, between bay 1 and 2, are beginning to fall, see photos 28 & 29, and there is an impact damaged hole within the plain plaster contained by the central plaster wreath, which is itself in reasonable condition. Excessive water damaged ceiling and wall plasters can be found at the eastern end of this first bay, see photo 30. The first ceiling bay has suffered water and impact damage in the past and has been partly reskimmed or skimmed originally to create a more even arched plain plaster finish coat, but this is in part de-bonding, see photos 22 & 23:

In bay 2, whilst the ornamental ventilation cover is in reasonable condition, the surrounding plain plaster and the planted on panel mouldings are cracked and there is some debonding of skim plaster, see photos 33 & 34. However, as well as the impact damage in this bay the adjacent rib, between bay 2 and 3 has deteriorated with prolonged damp, held against it by guano deposits, and is in a dangerous state and requires sections of the fibrous cast replacing, photos 24 & 25. It is only supported at its eastern end by the cornice below, see photos 35 & 36. The ribs do not appear to have been cast to the correct radius and the unevenness of the curve underlies other visible distress.

Bay 3, like the previous two, is edged by a distorted and failing cornice, and has areas of debonding skim plaster, and an area of particular distress can be found in the centre of the western end of this bay, see photos 37 & 38. The plaster ventilation grill in the fourth bay is cracked and requires repair and wiring up, photos 39 & 40. The cornice on the western end of the 4th bay is almost completely decayed, and the rib between the 4th and 5th bay is badly cracked all along its edge, and there is an overturning cornice on the east wall, see photos 41 & 42.

Bay 5 has badly water damaged wall and ceiling plaster at the eastern end of the bay; and cracking and debonding can be seen below the cast ceiling panels, see photos 45-48. In addition, the failing rib between the 5th and 4th bay is clearly visible, see photos 49 & 50. There is debonding and cracked skimming plaster at the eastern edge of the bay, see photos 43 & 44, and water damage has caused the cornice at the western

end to be lost. The plaster behind the decorative swags, as is found on all the other wall areas, has significantly de-bonded from the brick background, see photos 51 & 52.

In bay 6 the eastern third of the bay is distressed and the plaster has collapsed above its western end, because of rot in the supporting timbers, although the adjacent plaster ventilation grill is in reasonable condition, see photos 53, 54 and 55. The wall plasters are cracked and de-bonded and there are missing plaster wads, that should be holding the rib up between the 6th and 7th bay, see photos 56 and 57. Although evidence of missing and damaged wads can be seen above every rib on this ceiling, see photos 72-73.

The partial small 7th bay, which is 800 mm wider at its western end, has a damaged apex caused by people using the main access point above, see photos 58 & 59. Interestingly, the extra width of the bay at the eastern end has been formed using lath and plaster, it is not clear if this predates or postdates the cast panelled ceiling, see photo 60.

Overall, the ceiling, despite been cleaned of excessive levels of guano and dead birds, has pockets still remaining, see photos 66-68, reminding us of the extent of weight and moisture previously present in the back of this ceiling, which has caused extensive decay and damage to the fabric of all the gypsum plaster. With many of the cast panels warped, and some are pulling off the bottom of the ceiling joists which they are nailed on to, see photos 69-71. Similarly, the cast cornices are water damaged and warped and their supporting wads are failing, see photos 74-75.

It is not clear if the skim below most of the cast panels was introduced later or at the time of insertion, especially as it runs behind applied mouldings. However, because of movement, damp, and weight on the boards, in many areas it is de-bonding, see photo 77. The wall plaster to both the east and west walls has significantly de-bonded, which is compromising the fibrous cast decorative swags, frieze bands, and window surrounds, see photo 79. Below the original cement-lime bound plasters, near the frieze band, are more modern plasters, applied pilasters and wooden vertical architraves, continuing the window surrounds, and modern gypsum over skim, which is debonding, see photo 80, in the areas previously below the balconies.

The Condition Of The Proscenium Arch

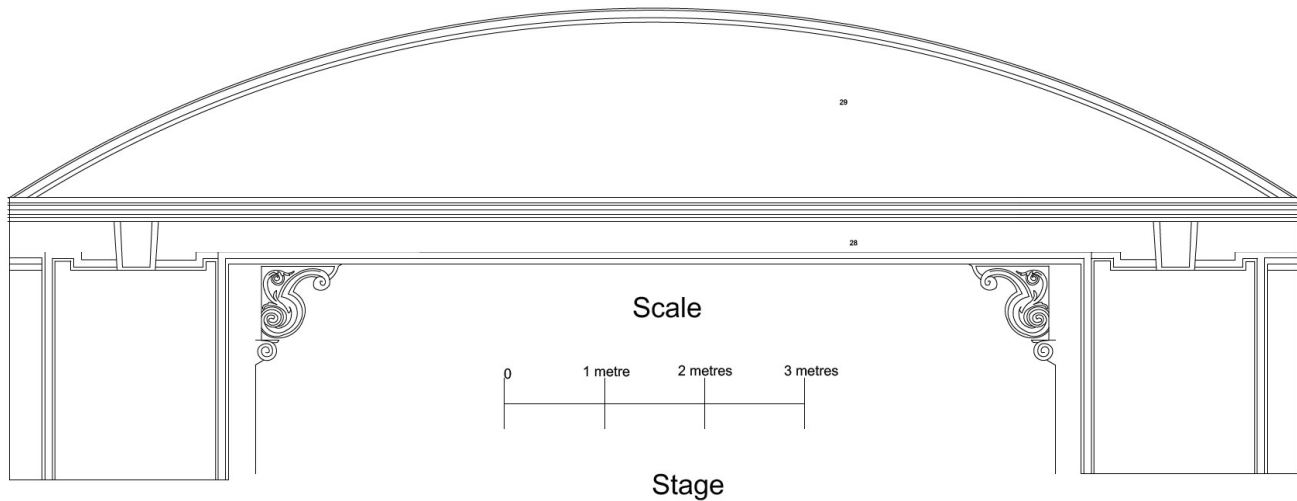
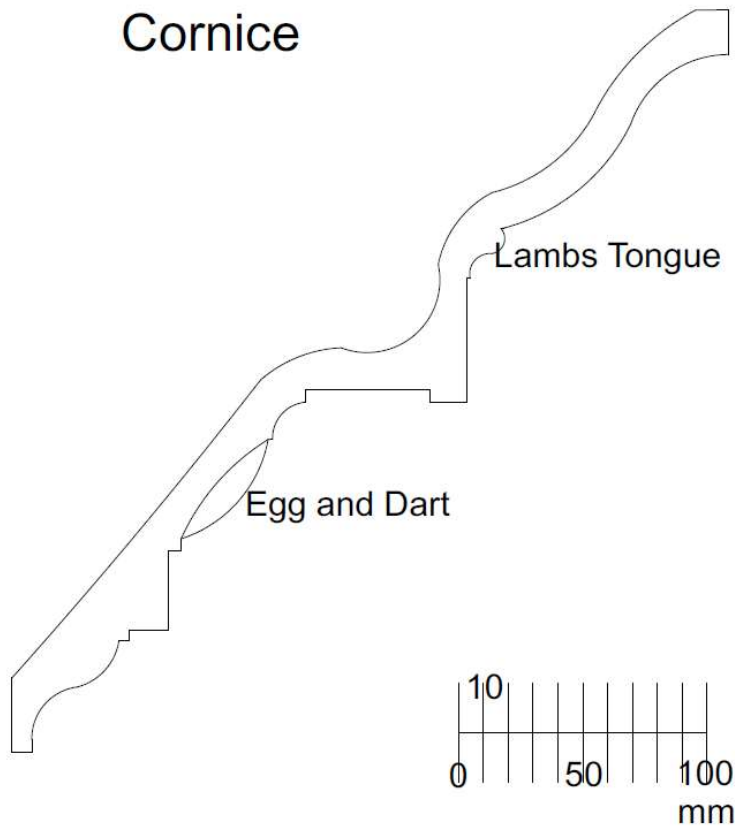


Diagram 4: How the plasterwork in this area may have looked originally. The original plaster to the west and east ends has been lost below the freeze band.

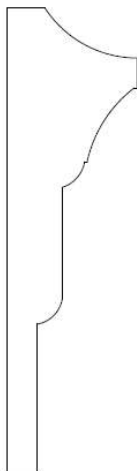
In contrast to the fibrous cast panel ceiling the enclosed proscenium arch and the proscenium beam below, carried by scroll console brackets, is created out of lath and lime plaster gauged with gypsum, see photo 10. This plaster needs conservation as does the vertical wall of the arch, as the plaster, in some areas, has only minimal supporting nibs, (but it is not deep enough to allow it to be secured back with sunken penny washers and screws), see photos 11 and 12. The projecting cornice, forming the springing point of this arch, is badly warped and deteriorated, see photo 13. Immediately below, the front of the proscenium beam is cracked, through the plaster on the lath, as is the soffit of the same beam, see photos 17-19.

The scrolled corbel console brackets, both of which appear to have been fastened up 90 degrees in the wrong orientation, are hung through this soffit by wads that need replacing, with wire reinforced wads, see photos 20 & 21. Similarly, the central cartouche, rebranded by the previous church, is hung off the vertical timbers in the proscenium arch, and also needs new wires and wads installing and reinforcement with a blanket wad at the neck of the cast, as the top section is badly cracked and needs to be re-secured urgently, see photos 14, 15 & 16.

Cornice



Freeze Band



Window surround

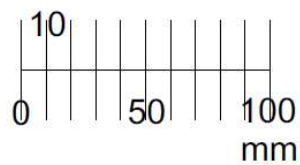
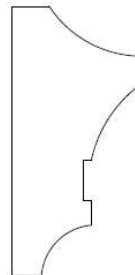


Diagram 5: The approximate shape and sizes of the decorative fibrous plaster cornice and some of the applied fibrous cast decoration.

A Schedule of Repairs

As the building is listed, set out below is a schedule of repair, but it may be more economical to replace nearly all the wall and ceiling plasterwork.

Activity	Budget Cost Estimate
Install a crash deck scaffold approx. 2 metres below the whole auditorium ceiling area, stepped down with the ceiling.	My main contractor
Consider installing a warm roof using softwood fibre boards above the existing rafters and improve the roof overhang and drainage away from the building.	My main contractor
Consider installing to all external walls 100 mm of external softwood fibre board insulation and Lime Green Prepbond WP and Finish WP modified breathable lime renders	My main contractor
Sheet up and protect the scaffold and windows.	£2,410.00
As emergency works remove all the existing cornice and remove from site and take the best remaining section to the workshop to create a mould.	£4,300.00
As emergency works screw up and install plaster wads, and cut a plaster joint line, to allow the main contractor to take down and replace the rotten timberwork in the western half of the 6 th bay, as indicated by the red square on diagram 2.	£1,800
As emergency works take down and replace the rotten timberwork in the western half of the bay, as indicated by the red square on diagram 2, and replace with new timber joists, to the same strength and dimensions of the existing.	My main contractor
Clean all the backs of the ribs and ceiling plasterwork of the remaining guano	My main contractor
Clean all the backs of the ribs with vacuums to allow them to be strengthen and supported by blanket wads, except where they are to be removed.	£6,300
As emergency work blanket wad 500 mm by 11 linear metres behind the existing rib between bay 1 and bay 2, where they can be saved and install approximately 27 supporting wired wads from the back, with new metal channel supports as required, remove 4 linear metres in four sections of damaged ribs.	£3,600
As emergency work remove all of the existing rib between bay 2 and bay 3. Take back the best section to the workshop to allow a mould to be formed later and remove from site all the remaining rib.	£1,800
As emergency work blanket wad 500 mm by 15 linear metres behind the existing rib between bay 3 and bay 4 and install approximately 36 supporting wired wads from the back, with new metal channel supports as required.	£4,900
As emergency work blanket wad 500 mm by 9 linear metres behind the existing rib between bay 4 and bay 5, where they can be saved and install approximately 27 supporting wired wads from the back, with new metal channel supports as required, remove 6 linear metres in four sections of damaged ribs.	£3,600
As emergency work blanket wad 500 mm by 15 linear metres behind the existing rib between bay 5 and bay 6 and install approximately 36 supporting wired wads from the back, with new metal channel supports as required.	£4,900
As emergency work blanket wad 500 mm by 9 linear metres behind the existing rib between bay 6 and bay 7, where they can be saved and install approximately 27 supporting wired wads from the back, with new metal channel supports as required, remove 6 linear metres of damaged rib.	£3,600

As emergency work resecure the plain curving cast panels back to the ceiling joists with approximately 1550 number counter sunk 50 mm screws and fill over screw heads with fine casting plaster.	£32,400
As emergency works install wires and wads, and blanket wads to make safe the cartouche that decorates the front of the proscenium arch	£1,800
Allow for extending 10 ceiling joists where they lack bearing on the lower steel beams of the trusses and allow for installing new ones where there is any rot in them.	My main contractor
As emergency works using plugs, stainless steel screws, sometimes with small penny washers, re-secure the six wall swags back to the walls behind, through the de-bonding plaster. Recess and fill over screws and washers.	£5,400
Install up to 280 square metres of new blanket wads to reinforce week cast ceiling panels.	£48,000
Resecure approximately 208 linear metres of ceiling panel moulding back to reinforced cast plain panels with approximately 400 number counter sunk 80 mm screws and fill over screw head with fine casting plaster.	£8,361
Prepare silicone rubber mould with GRP case of the principal ribs 500 mm x 150 mm x 1.8 m on radius, see the same radius as the top of the proscenium arch in diagram 4	£5,200
Cast and fix 25 linear metres of new rib mould in up to 11 pieces	£3,600
Prepare silicone rubber mould with GRP case of the cornice 250 mm x 250 mm x 1.8 m	£4,500
Prepare silicone rubber mould with GRP case of the frieze band 200 mm x 50 mm x 1.8 m	£3,000
Prepare silicone rubber mould with GRP case of the window surround band 150 mm x 50 mm x 1.8 m	£2,800
Prepare silicone rubber mould with GRP case of the double keystone 500 mm x 500 mm	£2,500
Remove 336 square metres of render from the wall, taking special care not to damage the retained swags.	By Main Contractor
Remove all embedded rotten timber from the walls that are exposed in this process and replace with brick.	By Main Contractor
Replaster 336 square metres of cleaned and repaired brick walls after all external works are complete and the walls are dry, with a moderately hydraulic lime plaster, consisting a 2-5 mm slurry/stipple coat of one part Ionic NHL3.5 Old White to two parts sharp sand, an 10 mm undercoat of one part Ionic NHL3.5 Old White to two and a half parts sharp sand, a second 8 mm undercoat of one part Ionic NHL3.5 Old White to three parts of sharp sand, and finish with a 2-3 mm Fine Stuff finish coat, consisting of one part Lime Putty to 1 part fine silica sand.	£40,300
Run cast pilasters, the length will depend upon the proposed new interior design, but based upon the existing design 500 mm x 60 mm x 60 linear metres, with 24 straight joints	£5,500
Cast and fix approximately 32 linear metres of frieze band, shown on diagram 5 with 24 external corners, 24 internal corners and 4 straight joints	£6,000
Cast and fix approximately 48 linear metres of window band, shown on diagram 5 with 24 external corners, 12 internal corners and 12 straight joints	£9,800
Cast and fix 6 key stones	£2,700

Cast and fix approximately 32 linear metres of cornice, shown on diagram 5 with 24 external corners, 24 internal corners and 4 straight joints	£12,000
Prepare silicone rubber mould with GRP case of the ceiling panel moulding band 100 mm x 60 mm x 1.8 m	£2,800
Replace the damaged ceiling area in bay 6, including casting 12 square metres of plain ceiling panels on a radius, and fix in the area outlined in red on diagram 1, and cast and fix approx. 6 linear metres of rib moulding 500 x 150 mm, in two pieces, with four straight joints, 8 linear metres of ceiling panel moulding approx. 100 x 60 mm, with 6 external comers and 2 internal corners.	£8,114
Form approximately 585 linear metres of new nibs, using water glass reinforced lime plaster, Lime Green Silic8 AD2, to the rear of proscenium arch's plaster.	£3,450
Install new wires and wads to carry corbel console brackets below the proscenium beam	£1,800
Repair the damaged ceiling ventilation grill in the fourth bay, using wires and small clip wads	£1,800
Scrape off and reskim 270 sq. m of the ceiling in lime fine stuff finish, gauged with 50 % fine casting plaster	£5,100
Carry out hand repairs to remaining decorative elements and cracked flat plaster areas	£4,500
Estimated total plastering costs of emergency work, excluding main contractor work	£76,810
Estimated remaining plastering costs, excluding main contractor work	£181,825
Estimated total plastering costs, excluding main contractor work	£258,635

The structure supporting the ceiling



Photos 1 & 2: The barrel vaulted ceiling, decorated with ribs and panel moulding, above the main auditorium space, with a previous open bay beyond the more recent partition at the back and the altered screen/stage area at the front.



Photos 3 and 4: The ceiling is supported by lightweight fabricated wrought iron trusses, which also support an earlier mechanical ventilation system.



Photos 5 & 6: Running along the length of the ceiling and supported off the tie beams of the steel trusses are substantial ceiling joists



Photos 7 & 8: These ceiling joists sit upon the bottom member of the trusses, and at both ends of the auditorium in pockets formed in the brickwork. Hung off the ceiling trusses are fibrous cast plain panels, which are just nailed on from below. The trusses also carry by unwired fibrous wads, the decorative ceiling ribs which hang directly below them.



Photo 9: Whilst generally the ceiling joists are in good condition there are some localised signs of rot and occasionally a lack of bearing on the lower members of the trusses.

Proscenium Arch



Photo 10: By contrast the enclosed proscenium arch and the proscenium beam below, carried by scroll console brackets, are created with lath and lime plaster gauged with gypsum.



Photos 11, 12 &13: The lath and plaster, with minimal nibs, forming the proscenium arch and the badly warped and deteriorated projecting cornice to the front.



Photos 14, 15 &16: The cartouche, rebranded by the previous church, is hung off the vertical timbers carrying this lath and plaster work. Unfortunately, the top section is badly cracked and needs to be re-secured urgently.



Photos 17-19: The lower edge of the front of the proscenium beam, which is cracked through the plaster on the lath; above the back of the lath and plaster that forms the soffit of the same beam, and a thin coat of gauged lime plaster to the front of the infilled proscenium arch.



Photos 20 & 21: One of the scrolled corbel console brackets, both of which appear to have been fastened up 90 degrees in the wrong orientation; and the support from above the soffit of the proscenium beam.

Bay 1



Photos 22 & 23: The first ceiling bay has suffered water and impact damage in the past and has been partly reskimmed or skimmed originally to create a more even arched plain plaster finish coat, but this is in part de-bonding.



Photos 24 & 25: As well as the impact damage in this bay the adjacent rib has deteriorated with prolonged damp, held against it by guano deposits and requires sections of the fibrous cast replacing.



Photos 26 & 27: Broken cast panels in the centre of the first bay expose the nature of the fibrous cast panel and its over skim.



Photos 28 & 29: The ceiling is badly cracked where it meets the front of the proscenium arch; and parts of the first fibrous rib are beginning to fall.



Photo 30: Excessive water damaged ceiling and wall plaster can be found at the eastern end of the first bay

Bay 2



Photos 31 & 32: The plaster ventilation grill in the second bay.



Photos 33 & 34: Whilst the ornamental ventilation cover is in reasonable condition the surrounding plain plaster and the planted on panel mouldings are cracked and there is some debonding of skim plaster.



Photos 35 & 36: The first fibrous plaster rib nearest the stage is falling and only supported at its eastern end by the cornice below. The ribs do not appear to have been cast to the correct radius and the unevenness of the curve underlies other visible distress in them.

Bay 3



Photos 37 & 38: The distorted and failing cornice can be seen in the first picture; and debonding skim and the area of distress in the centre of the western end of this bay, in the second.

Bay 4



Photos 39 & 40: The plaster ventilation grill in the fourth bay is cracked and requires repair and wiring up.



Photos 41 & 42: The almost completely decayed cornice on the western end of the bay; and a cracked edge all the way along the rib between the 4th and 5th bay, and the overturning cornice on the east wall.

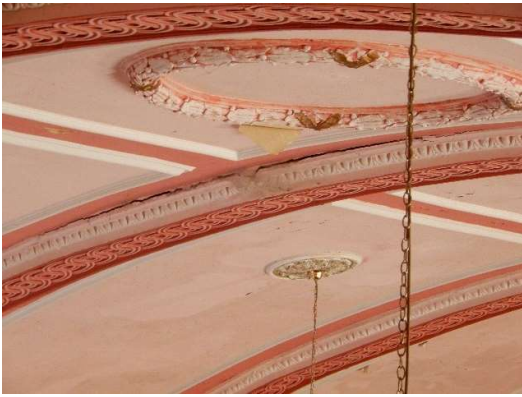


Photos 43 & 44: Debonding and cracked skimmed plaster at the eastern edge of the bay.

Bay 5



Photos 45-48: Badly water damaged wall and ceiling plaster at the eastern end of the 5th bay; and cracking and debonding can be seen below the cast ceiling panels.



Photos 49 & 50: The failing rib between the 5th and 4th bay is clearly visible.



Photos 51 & 52: Water damage has caused the cornice at the western end to be lost and the plaster behind the decorative swags on all the walls has significantly de-bonded from the brick background.

Bay 6



Photos 53 and 54: The distressed eastern third of the 6th bay; and the collapsed western end, although the plaster ventilation grill is in reasonable condition.



Photos 55-57: The rotten timbers above the western third of the 6th bay; the cracked and de-bonded wall plaster on the wall; and the missing plaster wads that should be holding the rib up between the 6th and 7th bay.

Bay 7



Photos 58 & 59: The partial small 7th bay which is 800 mm wider at its western end. The plaster at its apex is damaged; From above it is clear that this damage has been caused by people using the main access point above.



Photo 60: The extra width of the bay at the eastern end has been formed using lath and plaster.

General examples of damage found throughout the ceiling area



Photos 61-65: Cracked cast fibrous plaster plain panels, exposed hessian and laths within the casts after deterioration of the upper surfaces and patching after a fall of part of a panel.



Photos 66-68: Whilst the ceiling void has been cleaned of excessive levels of guano and dead birds, some pockets still remain, reminding us of the extent of weight and moisture previously present in the back of this ceiling.



Photos 69-71: Many of the cast panels are warped and some are pulling off the bottom of the ceiling joists which they are nailed on to.



Photos 72-73: The few remaining plaster and hessian only nibs have deteriorated and snapped.



Photos 74-75: With also failing wads trying to support a water damaged and warped cornice below



Photos 76 & 77: The cast plaster panels are carried off ceiling joists parallel but not touching the external brickwork, has reduced the amount of damage at the ceiling edges; damp and impact damage however has still caused debonding of the skim found under some of the boards.



Photos 78 & 79: Damp induced decay of the hessian in the plaster wads carrying the cornices has also meant some ribs may fall soon; and damp in the walls has caused extensive debonding in the wall's plasters, including those carrying the decorative swags.



Photo 80: De-bonding modern gypsum based plasters, which has been used to over skim the areas enclosed by and below the balconies, after they were removed.