LOCKER & RILEY

Koko, Camden, London.

Date of Visit: *4th March 2020.*

Project Title: *Koko*

Site and Location: Koko, Camden Town, London. NW1.

L&R Reference: J2016 Koko.

Locker and Riley (FP) Ltd

Contents:

1. Summary

- *Locker and Riley* were appointed by the Client (*Hope Lease Ltd*) on 19th February 2020 to carry out a condition survey and to take squeezes samples of the decorative plasterwork at the Koko Theatre following the fire on 6th January 2020.
- The strategy for the conservation and repair of the decorative plasterwork in the building following the fire was set out in L&R's email dated 5th February 2020 and estimate reference *EN 5385 Koko Fire Damage Q01.*
- Simon Willcox of L&R attended site on Wednesday 4th March 2020 to commence an initial inspection of the main areas affected by the fire and the water ingress into the building. In the absence of confirmation from the Consultant that the building is clear of asbestos it was not possible to carry out any intrusive inspections of the plasterwork in these areas.
- A contractor has commenced works to strip out the water affected items from the front of the building. These works were ongoing at the time of the visit on the 4th March.
- It is clear from this visit and previous inspections that water ingress from the fireman's hoses and subsequent rainfall has penetrated through the building on all floors and this is having a serious detrimental effect on the fibrous plasterwork and the solid plaster to the walls. This has already resulted in the loss of sections of fibrous plaster.
- It has been noted that the damp environment within the building is causing mould growth to the supporting timbers. This has been confirmed by the inspection and subsequent Report of the building by *Hutton & Rostron*. They confirm the importance of ensuring that the

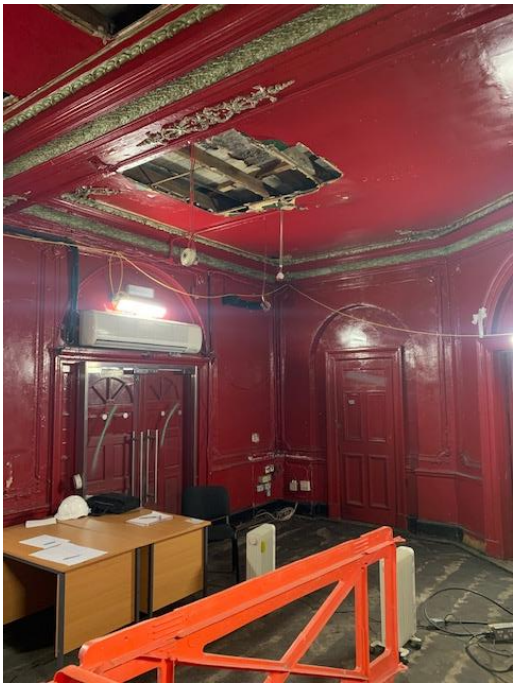
building is water tight and that adequate ventilation should be provided to all areas to maximise the drying out process.

- Many areas of walls and ceilings have been painted with a red gloss paint. It is suspected that this paint covering is impermeable and therefore capable of 'trapping' moisture in the plaster substrate behind.
- The inspection of the plasterwork carried out on the 4th March was limited to Rooms 1.14; 1.12; G-11 & G13.

2. Introduction & Description.

2.1.Room 1.14 Bar.

- A room of three bays divided by beams and with an enriched cornice to the perimeter. The Western and Middle Bays largely retain the fibrous plaster decorative cornice and the ornate scroll features on the ceiling to each mitre. The fibrous plaster beams have a recessed panel to the soffit with similar ornate features in relief at either end and centre. The Eastern bay has lost the original ceiling to accommodate the Bar and only retains a section of the cornice to the North and West elevation.
- The ingress of water from the fire fighting has caused the loss of much of the fibrous plaster ceiling to the West and Central bays to expose the timber supporting structure above.
- The walls are of plaster onto a masonry substrate and are decorated with plaster panels in relief. These panels have decorative quadrant corners.

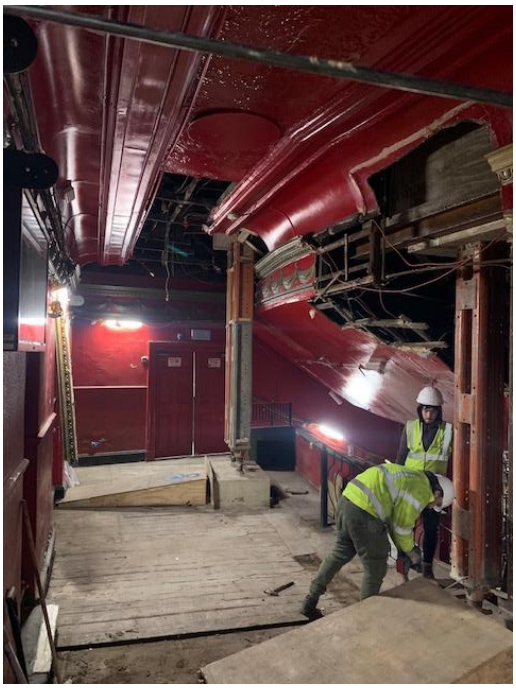


- The walls and ceiling soffits are coated with thick red paint. In many areas this has ‘blistered’ due to the trapped moisture held in the masonry walls behind. The Report by *Catherine* Hassall (March 2020) confirms that the red surface paint covers a succession of applications including to some surfaces a gypsum skim coat. The removal of these paint layers by chemical and mechanical means would be time consuming and expensive with an uncertain outcome given the damp status of the plaster substrate.
- The complete removal of the wall plaster to reveal the masonry substrate is the only way to ensure successful drying out. Retention of wall plaster greatly hinders and prevents the loss of trapped moisture in the masonry which will leave a legacy of potential efflorescence of salts, conditions suitable for fungal attack on timber and the appearance of ‘damp patches’ and discolouration on completed decorated walls.

- It was not possible to closely inspect the timber support system below the concrete soffit nor assess the integrity of the remaining fibrous plaster cornice and soffit.
- At this preliminary stage and subject to the reports by the Asbestos Consultant, the Structural Engineer, the paint and timber/damp specialists we would suggest the following:
    - The complete removal of the wall plaster to reveal the masonry substrate is the only way to ensure successful drying out.
    - Samples and squeezes should be taken of the:
        1. ceiling corner enrichments,
        2. decorative cornice,
        3. beam casing including the ornate relief details
        4. wall mouldings.
    - The condition and integrity of the fibrous plaster cornice and remaining ceiling soffit should be closely inspected.
    - It is anticipated that due to the condition of the timber supporting structure and the damp condition of the existing plasterwork as a consequence of the January 2020 fire that there will be further loss of plasterwork and which will lead to 100% replacement.
    - Replacement and renewal of decorative plasterwork can be achieved by creating moulds from samples/squeezes obtained from site.

2.2. Room 1.12.

- A large room behind the Circle Bar with a curved elevation to the raking North elevation. The perimeter cornice is a large plain cove with a profiled band to the flat soffit. Beneath the cove is an egg and dart enriched light trough cornice and a frieze with theatrical swags in relief. The sloping soffit is plain. These mouldings are all constructed of fibrous plaster suspended by timbers below a concrete soffit.
- The condition of the fibrous plaster cornice, frieze and ceiling is very poor due to the considerable amounts of fire related water and the ongoing damp conditions. Considerable sections of plaster ceiling and cove have been lost and those that remain appear to be in a fragile state.
- The insertion of structural piers was permitted by Planning Application nr 2019/0695/L and granted on 15th May 2019. There has been some loss of plaster fabric due to their insertion but this has greatly been compounded by the damage caused by the fire and water penetration since January 2020.



- The walls are plain with a simple dado rail and skirting. Much of the wall surface has been painted over a textured (paper?) surface with a thick gloss red paint.

- It was not possible to closely inspect the timber support system below the concrete soffit nor assess the integrity of the remaining fibrous plaster cornice and soffit.
- At this preliminary stage and subject to the reports by the Asbestos Consultant, the Structural Engineer, the paint and timber/damp specialists we would suggest the following:
    - It is L&R's consideration that all of the remaining sections of plaster ceiling, cornice and frieze will be lost due to the irreversible damage caused by the fire and water ingress.. Therefore, samples and squeezes should be taken of the following mouldings:
        1. Plain cove and ceiling band.
        2. Egg and Dart cornice and frieze.
    - Chases are cut into the wall plaster to determine the condition of the masonry and substrate behind with the assumption that it will be removed to aid the drying process.

2.3.Room G-11.

- The Entrance Hall/Foyer on the Ground Floor of the Theatre. The area is divided by four wide plain arches and pilasters into five bays. Each bay has a plain fibrous plaster flat ceiling with a egg and dart cornice to the perimeter. The North elevation has two matching profiled fibrous plaster niche heads above door openings into the main auditorium.
- The insertion of structural piers was permitted by Planning Application nr 2019/0695/L and granted on 15th May 2019. There has been some loss of plaster fabric due to their insertion but this has greatly been compounded by the damage caused by the fire and water penetration since January 2020.

- The arches and pilasters have lost small sections due to the structural works, however the poor condition and fragility of the ceiling, cornice and walls are as a consequence of the fire and subsequent water damage.
- The walls are plain with a simple dado rail and skirting. Much of the wall surface has been painted over a textured (paper?) surface with a thick gloss red paint.
- It was not possible to closely inspect the timber support system below the concrete soffit nor assess the integrity of the remaining fibrous plaster cornice and soffit due to issues of access and the risk of asbestos.

- At this preliminary stage and subject to the reports by the Asbestos Consultant, the Structural Engineer, the paint and timber/damp specialists we would suggest the following:
    - It is L&R's consideration that much of the remaining sections of plaster ceiling, cornice and frieze will be lost. Therefore, samples and squeezes should be taken of the following mouldings:
        1. Arch and pilaster sections.
        2. Egg and Dart cornice.
        3. Niche heads.
    - Chases are cut into the wall plaster to determine the condition of the masonry and substrate behind.
    - Removal of the wall plaster would greatly enhance the drying process and greatly remove the risk of legacy issues such as efflorescence, fungal attack and staining/damp on finished decorative surfaces.

2.4.Room G-13.

- This Foyer area consists of three bays each containing a shallow oval dome and an enriched cove to the perimeter. The dividing beams have decorative elements in relief. The walls are decorated with marble pilasters and panels with ornate quadrant corners.
- The ceilings, cornice and beams are of fibrous plaster construction suspended from the concrete slab above on timber joists and noggins. The recent ingress of water has caused the failure and loss of some sections of ceiling soffit. Further areas appear to be in a poor condition and are at risk of collapse.

- It was not possible to closely inspect the timber support system below the concrete soffit nor assess the integrity of the remaining fibrous plaster cornice and soffit due to lack of close access and the potential of ACM's within the ceiling void.
- At this preliminary stage and subject to the reports by the Asbestos Consultant, the Structural Engineer, the paint and timber/damp specialists we would suggest the following:
    - It is probable that some areas and sections of the ceiling, beam and cornice may be lost. Therefore, samples and squeezes should be taken of the following mouldings:
        1. Beam sections.
        2. Enriched cornice.

3. Wall mouldings

- Chases are cut into the wall plaster to determine the condition of the masonry and substrate behind.
- Sample areas of wall and ceiling should be paint stripped. This would help to determine the value and benefit of such a task

3. **Recommendations.**

- The asbestos, paint, structural and timber/damp inspections and reports are concluded and issued.
- The ongoing strip out is concluded. This will allow with the issue of other Reports for the decorative plasterwork to the areas described above to be closely inspected. Consequently, a schedule can be produced of areas of existing plasterwork which cannot be reasonably be saved and those areas which should be carefully removed.
- It is generally accepted that the removal of areas of plasterwork to ceilings and walls will allow the building to dry out at a quicker rate. There is a real risk that retained fibrous plasterwork and lime based plaster can be detrimentally affected by residual moisture left in retained

in historic fabric and masonry for some time after the building works are completed.

ADDENDUM Nr 1 **14th April 2020.**

1. Summary

This Addendum Nr 1 to the Preliminary Report is written in response to the receipt of further inspections, telephone and video discussions and reports on the condition of the building following January's fire. These Reports include the Asbestos Survey Report by *Ayerst Environmental Ltd* dated 23rd March 2020 and the interior Paint Analysis Report dated March 2020 by *Catherine Hassall*. The site surveys of the timber structure by *Hutton & Rostron Ltd* are ongoing.
The current lockdown instructed by the U.K. Government due to the Corvid-19 virus has prevented a further visit to site to continue with the visual inspection of the decorative plasterwork. This Addendum is therefore, a summary of the further discussions and the issued Reports as it affects the plasterwork to the fire damaged areas at the front of the building.

2. Comments

2.1.Room 1.14. Bar.

- The Paint Analysis Report (March 2020) describes the original 1900 paint decorative scheme to be present on all surfaces to walls and ceilings with many later layers subsequently added. The red paint visible on the walls, ceiling and joinery is*" not a standard house paint. It is flexible, with a rubbery texture and is unaffected by a range of solvents".* The wall panels above the dado rail have received a skim coat of gypsum plaster.
- The Asbestos survey identified some asbestos present in the cupboard and that this should be removed.

- Action to remove the asbestos, redundant fire and water affected services and the layers of paint from the walls and ceilings by chemical means are likely to lead to further damage and loss of the existing mouldings.
- The complete removal of the wall plaster and the remaining sections of cornice, beam and ceiling will allow full access to the structure behind, and facilitate the drying process. The loss of original plasterwork will be mitigated by the absence for the need to remove layers of paint, carry out securing works and repairs to remaining mouldings. It will also allow the successful drying out of the substrate.
- The earlier L&R Report recommended that samples and squeezes of the existing mouldings should be taken at an early stage as it is probable that the ceiling, cornice, beams and wall mouldings will be lost and will need to be replaced to match the existing.

2.2.Room 1.12. Lobby at back of Auditorium.

- The Paint Analysis Report (March 2020) describes the original 1900 paint decorative scheme to be present on all surfaces to walls and ceilings with many later layers subsequently added. The red paint visible on the walls, ceiling and joinery is*" not a standard house paint. It is flexible, with a rubbery texture and is unaffected by a range of solvents*". The plain moulding between the cove and the flat soffit is thought to be a C20th replacement.
- The Asbestos survey identified some asbestos present in the floor and that this should be removed.
- Action to remove the asbestos, redundant fire and water affected services, temporary structural piers and the layers of paint from the walls and ceilings by chemical means are likely to lead to further damage and loss of the existing mouldings.
- The complete removal of the wall plaster and the remaining sections of cornice, beam and ceiling will allow full access to the structure behind and will facilitate the drying process. The loss of original plasterwork will be mitigated by the absence for the need to remove layers of paint, carry out securing works and repairs to remaining mouldings.
- The earlier L&R Report recommended that samples and squeezes of the existing mouldings should be taken at an early stage as it is probable that all the plain cove, ceiling band, enriched frieze and cornice will be lost due to their poor condition due to water ingress from the firefighting efforts and will require to be replaced to match the existing.

2.3.Room G.11. Ground Floor Lobby between Entrance and Auditorium.

- The Paint Analysis Report (March 2020) describes that much of the original 1900 paint decorative scheme has been lost and this has been replaced with lining paper. The red paint visible on the walls, ceiling and joinery is *" not a standard house paint. It is flexible, with a rubbery texture and is unaffected by a range of solvents*". The plain moulding between the cove and the flat soffit is thought to be a C20th replacement.
- The Asbestos survey identified some asbestos present in the accumulated debris and insulating board within the ceiling void. Asbestos was also found in lagging around pipes. The removal of this asbestos will inevitably cause further loss to the plasterwork.
- Action to remove redundant services, temporary structural piers and the layers of paint from the walls and ceilings by chemical means are likely to lead to further damage and loss of the existing mouldings.
- The complete removal of the wall plaster and the remaining sections of cornice, beam and ceiling will allow full access to the structure behind, and facilitate the drying process. The loss of original plasterwork will be mitigated by the absence for the need to remove layers of paint, carry out securing works and repairs to remaining mouldings.
- The earlier L&R Report recommended that samples and squeezes of the existing mouldings should be taken at an early stage as it is probable that all the egg and dart cornice, arches and pilasters and niches will be lost and will require to be replaced to match the existing. If possible, the surviving niche heads should be retained.

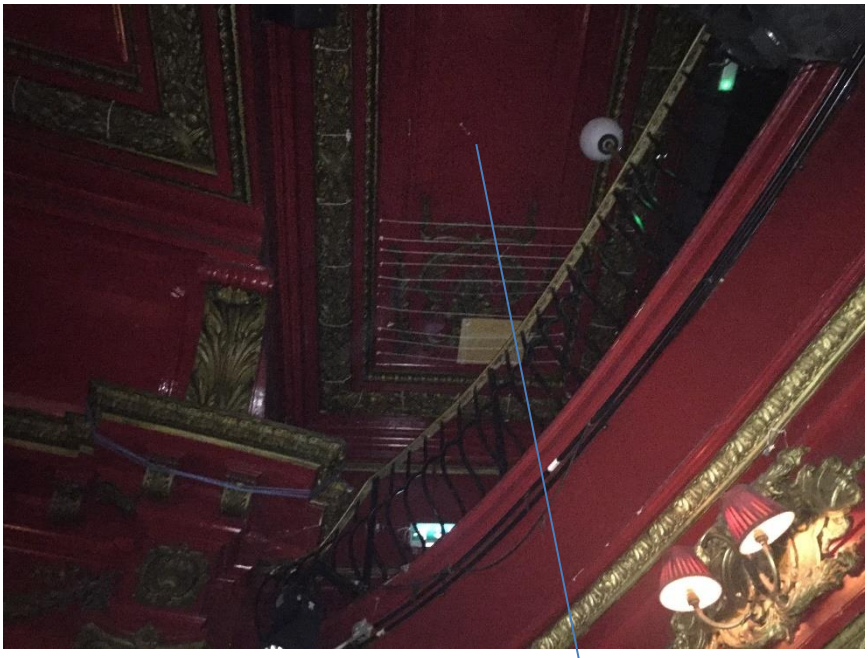
2.4.Room G.13. Ground Floor Main Entrance.

- The Paint Analysis Report (March 2020) describes the original 1900 paint decorative scheme to be present on all surfaces to walls and ceilings with many later layers subsequently added.
- The Asbestos survey identified some asbestos contained within bagged rubble and other debris present in the room.
- The loss of some sections of plaster due to direct water ingress and the damp conditions may lead to some further loss of plaster and some localised areas where holes need to be cut in the plaster soffit to facilitate the drying process and if necessary, aid inspection in the ceiling void. It is anticipated that efforts should be made to save and secure the decorative plaster in this room as at present so much of it appears largely intact and missing sections are plain with low significance. However, samples and squeezes should be taken of the

beam, the enriched cornice and the dome mouldings as a precaution against complete loss.

2.5.Room 3.09. Third Floor level, Western End of Main Auditorium.

- This area lies to the far western side of the main auditorium and consists of a rectangular area of three coffers. The works to secure, repair and replace missing and damaged sections was partially completed in the L&R contracted works carried out in the Autumn of 2019.
- We have noted that this area has been badly affected by water ingress as a consequence of the January 2020 fire. Subject to further inspection it is considered that this flat coffered ceiling will be lost and should be carefully removed. The removal of these plaster sections will also benefit the drying out process and allow access for other trades.
- Samples and squeezes of the existing fibrous plaster mouldings will be required so that new moulds and replacement fibrous plaster casts made and installed all to match the existing.



2.6. Auditorium Walls.

- It has not been possible to inspect the fibrous plaster adorning the Auditorium walls due to the lack of access and the risk of ACM contamination.
- The walls and the balcony fronts are heavily decorated with fibrous plaster mouldings applied to the building structure. The Catherine Hassall Paint Report (March 2020) records the extensive use of the red paint over many of the wall surfaces together with gold paint over many of the wall enrichments and figures.
- Initial observation of these walls would suggest that damage caused by the fire and water ingress was localised. The exact locality and extent of this damage can only be assessed from a future close inspection. It is possible that the discovery of ACM's , the need to treat, ventilate and/or remove damp timber structures and damaged services may lead to the controlled loss of plaster fabric from walls and balcony fronts. If this requirement occurs then specialist advice and careful removal will help to minimise any loss of fabric.

2.7. Auditorium Ceiling.

- The works to secure the main Auditorium fibrous plaster ceiling were being undertaken by L&R and were 60-70% complete up to November 2019 when these works were halted due to the discovery of ACM.
- The Auditorium void has not been inspected to assess the impact from the January 2020 fire. With the exception of the flat coffered area of fibrous plaster (Item 2.5 above refers) it is considered that the void escaped any large scale flooding and fire damage. The present condition of the plasterwork post fire can be assessed when safe access is possible.
- It is possible that the discovery of ACM's , the need to treat, ventilate and/or remove damp timber structures and damaged services may lead to the controlled loss of plaster fabric. If this requirement occurs then specialist advice and careful removal will to minimise any loss of fabric.

2.8. Ground Floor G-17 Entrance Foyer.

- The plasterwork to this area has not yet been inspected by L&R.
- The ceiling is formed by three equal rectangular coffers with an octagonal skylight to each coffer. The beams, spandrel soffits and modillion enriched cornice all appear to be of fibrous plaster.
- The condition of the plasterwork as a result of the January 2020 fire and flood is not known. It is thought that the area was affected by water and therefore consideration must be given to the status and condition of the timber supporting structure and the plasterwork itself.
- Therefore, as a precaution samples and/or squeezes should be taken of the decorative elements to ensure that the decorative plasterwork can be faithfully recorded and reproduced if required.

3. Conclusion.

- The decorative plasterwork to ceilings and walls in Rooms G-11; 1.12; part 3.09 & 1.14 are likely to be completely lost and will require new fibrous plaster sections to match the existing. Consequently, samples and squeezes should be taken as soon as possible, subject to clarity and approval on the current works to remove asbestos from the building.
- The loss of these mouldings and plaster from these areas will greatly benefit the drying process and remove any need to strip layers of paint from surfaces and mouldings. It will also aid the introduction of new services where applicable to these areas.
- It is anticipated that from samples and squeezes removed from site that new moulds will be made that will match the original profiles 'as new'. These new fibrous plaster casts will be installed to new metal supports where applicable.
- The fibrous plaster enrichments and mouldings to the Auditorium walls and balcony fronts have not been inspected. However, it is anticipated that these areas have largely been unaffected by the consequences of the January 2020 fire. We would suggest that when access can be provided these elevations are closely inspected to determine the extent of any remedial work that will be required.
- L&R's contracted works to secure the main Auditorium ceiling was 70% complete at the time of the fire. It is not known if the fibrous plaster domed ceiling was adversely affected by the fire and water. When safe to do so, this area should be inspected to confirm any damage.
- Areas of the building still remain to be inspected for damage to the decorative plasterwork as a consequence of the fire. These areas include the Basement, the Entrance Foyer G-17 and smaller rooms on other floors.

ADDENDUM Nr 2 **5th May 2020.**

1. Summary.

This Addendum Nr 2 is written in following an inspection of the decorative plasterwork carried out by Simon Willcox and Lee Watts of *Locker and Riley* on the 5th May 2020. This inspection was possible due to confirmation by ODP that the areas to be inspected were clear of ACM's and that access was possible.

The aim of this inspection was to assess the existing plasterwork to Areas 1.14; 1.12, G13 & G11 to see if its condition and status had significantly changed since the previous inspection on the 4th March 2020. Secondly its purpose was to inspect the Entrance Foyer G-17, the Auditorium Walls and the rectangular area to the Western end of 3.09 if safe access allowed. Reference is made to the *Hutton & Rostron Draft Report* on the Timber Structures Condition Report dated 14th April 2020.

There was also an intention to identify and confirm sections of decorative plasterwork which were to be removed as a sample and those where rubber squeezes could be taken.

2. Comments

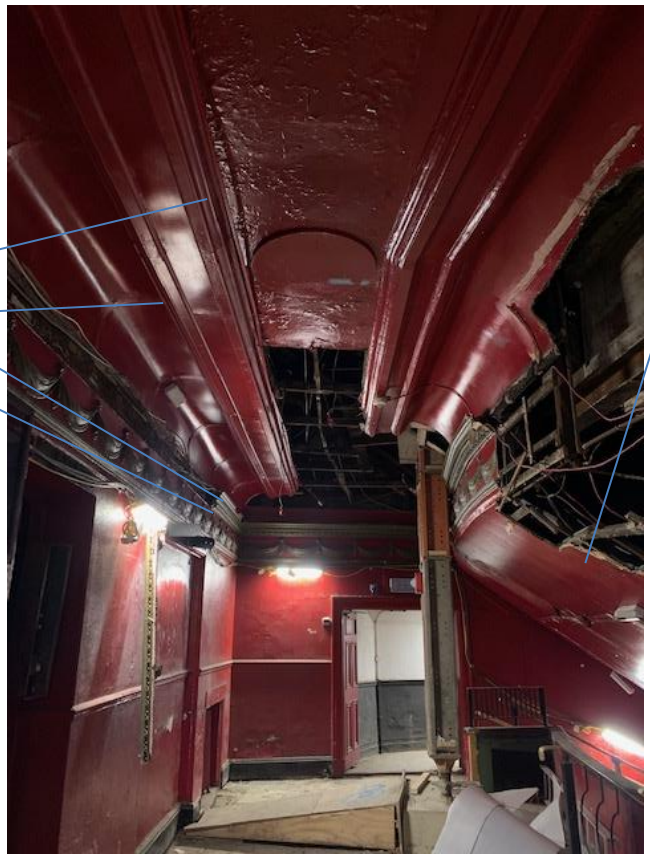
2.1. Room 1.14. Bar.

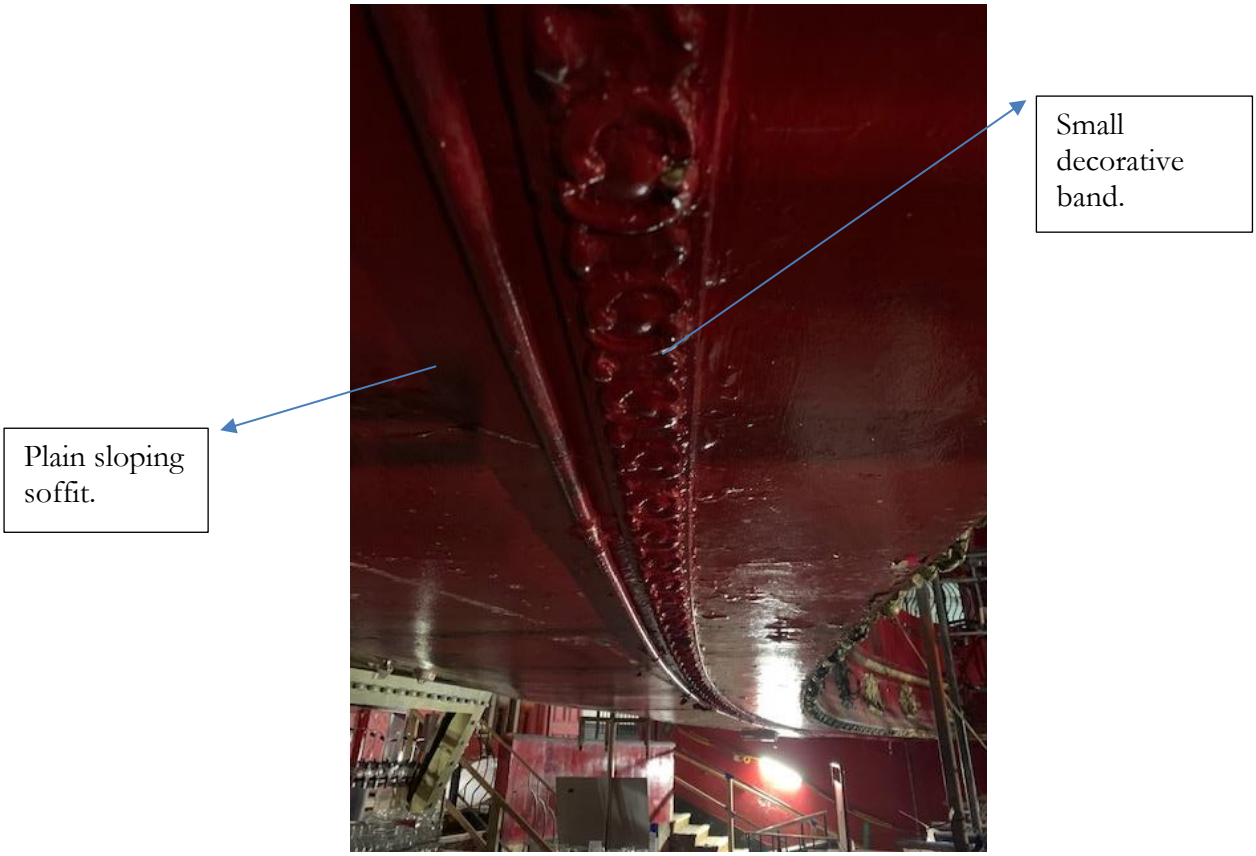
- A sample paint strip of the wall moulding had been carried out. This confirmed that the plain panel moulding was fibrous plaster and approximately 70mm wide with an integral 'stile' of 90mm. This was applied to the masonry wall surface to create 'raised and fielded panels.
- The *Hutton & Rostron Report* confirmed that the supporting timber elements behind the ceiling had been badly affected by water ingress and were vulnerable to fungal decay. Their Report also expressed concern on the condition of the steel plate fixings in the clinker concrete slab.
- L&R would confirm their view that their proposed strategy for the complete removal of the plaster from the ceiling and walls should be adopted due to the magnitude and extent of the water ingress through the building's structure following the fire.
- It was possible to confirm that the following samples and squeezes were required:
    - Ceiling corner enrichments,
    - Decorative cornice,
    - Beam casing including the ornate relief details
    - Plain wall moulding including enriched quadrant corner.

2.2.Room 1.12. Lobby at back of Auditorium.

- The *Hutton & Rostron Report* confirmed that the supporting timber and steel elements behind the ceiling had been badly affected by water ingress and were vulnerable to fungal decay. Their Report also identified the ceiling void is contaminated by ACM's.
- The existing condition and obvious fragility of the remaining sections of decorative plasterwork to this area would confirm L&R's recommendation that it should be replaced with new sections to match the existing. This would include the replacement of the existing angled and sloping soffit with new fibrous plaster sections.
- This raking plain soffit ends at the Balcony Front where there is a small decorative band, approximately 60mm wide. This will be lost but samples/squeezes of this should be taken to ensure faithful replication.
- Therefore, samples and squeezes should be taken of the following mouldings:
    - Plain cove and ceiling band.

- Egg and Dart cornice and frieze.
- Small decorative band at lower end of raking soffit.





2.3.Room G.11. Ground Floor Lobby between Entrance and Auditorium.

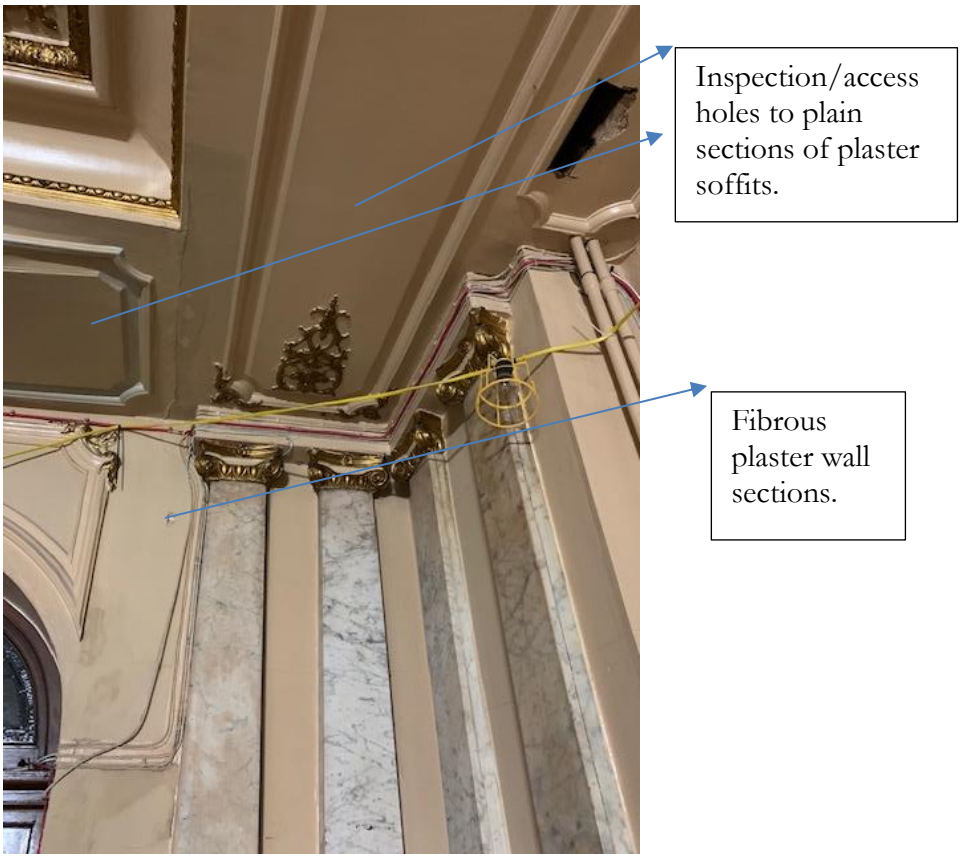
- The *H&R Report* confirmed the threat posed by the retention of moisture within the structure behind the ceilings, arch and pilaster fibrous plaster due to the absence of ventilation.
- It remains L&R's consideration that much of the remaining sections of plaster ceiling, cornice, arches and pilasters will be lost as their condition is so poor as a consequence of the water ingress following the fire. Therefore, samples and squeezes should be taken of the following mouldings:
    - Arch and pilaster sections.
    - Egg and Dart cornice.

- Every effort should be made to protect the decorative niche hoods (2nr) and the plain niche hoods (2nr) as they are in a reasonable condition and should remain insitu. L&R would suggest that their condition is monitored on a regular basis and any threat to their status from the removal of ACM's is assessed.

2.4.Room G.13. Ground Floor Main Entrance.

- The inspection on 5th May 2020 of this area confirmed that the condition of the plaster ceiling had deteriorated in recent weeks. It is thought that damp is penetrating through the fibrous plaster and 'pushing' off the layers of paint.
- Areas of the plaster ceiling were 'prodded' with a broom handle and in a number of locations the condition and integrity of the fibrous plaster was found to be weak.
- *The Hutton & Rostron Report* made a recommendation that ventilation should be made possible to the ceiling void to aid the drying process. L&R would therefore propose that a number of holes be cut into the fibrous plaster ceiling soffit. These holes where possible would be sited in plain sections to minimise the cost of restoration and would be approximately 250-350mm in diameter. These holes would therefore provide the ventilation to dry out the timber and plaster in the ceiling void they would also allow access to introduce new gypsum plaster wads with quadaxial and wire reinforcement to re-secure the soffit to the timber sub-structure.
- L&R would recommend that these holes and securing works are carried out as soon as possible to ensure the maximum amount of plaster fabric can be retained.

- The walls are also fabricated in fibrous plaster and fixed to timber noggins secured to the masonry walls. It can be assumed that water has penetrated these masonry walls and has affected the timber battens/noggins behind.



- Similarly, L&R would propose to cut inspection holes into the fibrous plaster wall sections at suitable sites. This would aid the drying process and allow further inspection of the timber fixings behind and if applicable to secure with plaster, quadaxial and wire ties.

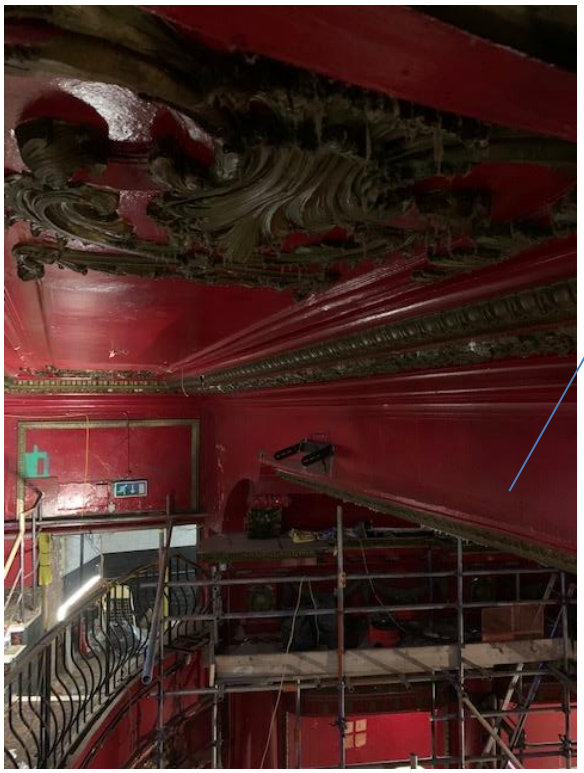
2.5.Ground Floor G-17 Entrance Foyer.

- Close access to this area was not possible due to the amount of builders rubbish and debris on the floor in this area. Furthermore, the ceiling and walls were obscured with scaffolding making any close inspection impossible.
- The presence of this scaffolding makes an assessment of the plasterwork's status and condition difficult. It is highly probable that significant amounts of water from the fire have penetrated the plaster soffits and skylights. However, at this stage we would assume like the neighbouring ceiling in G13 the intention must be to save and conserve the plasterwork to these coffers.
- L&R would advise that access is made possible as soon as is reasonably possible to allow a close inspection of the ceiling soffit plasterwork.

2.6.Room 3.09. Third Floor level, Western End of Main Auditorium.

- Access was possible to the central part of this rectangular ceiling via a bespoke scaffold on 5th May 2020.
- L&R have in their Contract works up to November 2019 carried out some major securing works to the back of this fibrous plaster ceiling. This involved the introduction of wires and gypsum plaster with quadaxial wadding to the back of the ceiling. In addition, some of the missing decorative plaster elements to the face of the ceiling were moulded and replaced to match the existing.
- The H&R Report noted that water was still visibly present on the back of the ceiling and that the supporting timber structure should be considered for replacement as they would be vulnerable to decay. The Report also notes that the recent repairs to the back of this ceiling include for encased timber battens which have become damp and will prove to be resistant to drying.
- Close investigation from below reveals that the original plaster face with its layer of red paint is structurally weak in places. In particular the red painted fibrous plaster downstand to the Auditorium dome itself was found to be in a

very poor condition. The black soffit and upstand on the other side is in a similar poor condition.

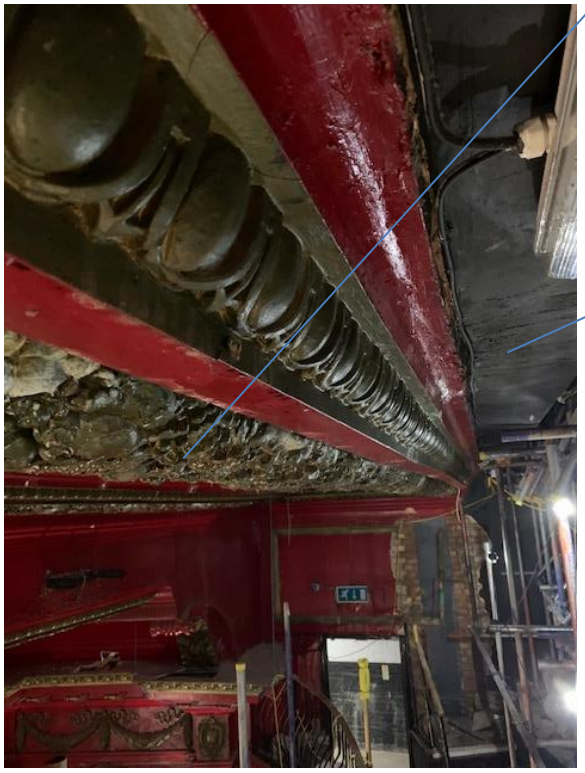


- L&R would confirm its earlier recommendation that the fibrous plaster soffit with its decorative enrichments forming two matching bays and to include the red painted downstand and black painted upstand should be carefully taken down and replaced with new sections to match the existing.
- L&R have reached this conclusion on the basis of the widespread and significant water ingress as a consequence of the fire in January 2020. Water ingress and persistent damp conditions are well known factors leading to the degradation and eventual failure of hessian embedded within the fibrous plaster casts and supporting wads. The combination of this threat and that highlighted in the H&R Report of the legacy risk of timber decay in the supporting structure supports this recommendation.

Large scroll enrichment .

Egg and Dart enriched cornice.

Enriched band.



Black soffit and upstand.

2.7.Auditorium Walls.

- Access to the Northern elevation was possible to the upper area below the modillioned cornice on the 5th May 2020.
- L&R have to complete their contracted works to secure the projecting modillion enriched cornice.

- Our limited inspection of the fibrous plaster walls on the Northern elevation revealed little evidence of any substantial water ingress from the January 2020 fire. It is possible that moisture has affected the masonry structure behind. The H&R investigation did not include for the Auditorium walls due to access issues and the discovery of ACM's.
- L&R would recommend that some inspection holes are cut into the fibrous plaster wall mouldings to allow access to view the status and condition of the timber support system behind.

2.8 Auditorium Ceiling

- There is no access to the face of the Auditorium ceiling. A number of holes exist in the fibrous plaster ceiling caused by the removal of redundant light fittings.
- L&R would recommend that the face of the Auditorium ceiling is inspected when access is available.

3.0. Conclusion.

- The further discovery of ACM's in and around the Auditorium and in particular beneath the floorboards as highlighted in the H&R Report and its authorised removal will cause further damage and loss to the decorative plasterwork. The contamination by ACM to the back of ceiling soffits and supporting timbers may mean that the collateral damage and loss of plasterwork will be quite extensive. At this stage it is difficult to assess the extent of the plasterwork that will be affected. However, we would suggest that the works by authorised asbestos removal contractors are monitored and controlled to minimise this potential loss of historic fabric.
- There will be further collateral damage to existing plasterwork by the removal of redundant and the introduction of new M&E services. Again we would suggest that these works be monitored and managed to minimise the damage to the plasterwork.
- The H&R Report (April 2020) provided *"…conclusive evidence of significant moisture entrapment, as well as issues relating to interstitial condensation and an inadequate airflow widespread within historic ceiling voids. This has already led to the presence of significant surface mould growth and spores in areas, which left unchecked will lead to further and more damaging/significant damp and decay issues and widescale deterioration of decorative moulded plaster ceilings beneath."*
- Hessian incorporated in historic fibrous plasterwork when in contact with moisture degrades at a faster rate leading to failure and potential collapse and loss. Failure of historic plasterwork can be immediate due to large amounts of water penetrating from above as in the case of sections of ceiling in the

Entrance Hall G-13 or it can be as a consequence of long term moisture entrapment.

- The L&R investigations and of those carried out by *Hutton & Rostron* confirm that the plasterwork in the areas described in the Report above have all been affected by water ingress as a result of the fire in January 2020. L&R have proposed to attempt to save the fibrous plaster ceilings in the Entrance Hall G-13 and Foyer G17 partially because of their significance and partially because they remain at the moment essentially intact. The plasterwork to the Bar 1.14; the Lobby 1.12; Lobby G.11 and the Western ceiling in 3.09 Auditorium are in a much poorer condition with significant areas lost due to the ingress of water and beyond reasonable repair and restoration.

ADDENDUM Nr 3. August 2020.

1. Summary.

Simon Willcox of *Locker and Riley* and Andrew Ellis of *Hutton & Rostron* met on site on the morning of Wednesday 5th August 2020. The purpose of the meeting was to carry out an inspection of the ceiling void in the Entrance Hall G-13 and to inspect the existing ceiling in the Foyer G-17.Earlier works carried out under instruction by L&R had cut inspection holes to the plain sections of ceiling soffit in G-13 to further expose the ceiling void. The purpose of these holes was to allow greater access across the soffit to inspect the condition and status of the existing fibrous plasterwork and its timber supporting structure and to allow for an increased air flow to assist with the drying process.

The areas below the three coffered ceilings in the Foyer G-17 had largely been cleared of rubbish and other debris allowing access via a ladder to inspect the ceiling soffit. Scaffolding, erected to support the ceiling and structure above was still in place which did hinder a full inspection across all three areas.

2. Observations.

G-13 Entrance Hall.

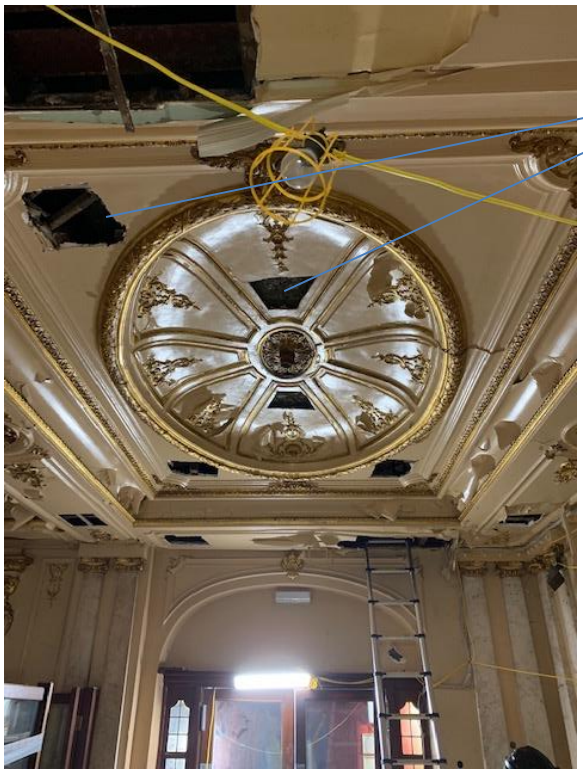
- L&R had cut away areas of fibrous plaster ceiling to the plain sections of the perimeter panels and to the two beams. Smaller holes had been formed to the enriched central domes.
- The fibrous plaster casts were fixed by means of ferrous screws and unreinforced plaster wads to a timber structure creating a void some 520mm high. The fibrous plaster central dome occupied this height and

were secured to the surrounding timber structure. Timber battens (approx 75 x 45mm) were fixed to a concrete clinker by means of ferrous nails.

- Our inspection showed that the fibrous plaster was in a weak and poor condition as a consequence of its exposure to water ingress and the damp conditions. The plaster wads tying the casts to the timber were observed to be friable and weak. Applied pressure from below to the plaster soffit produced cracking and movement demonstrating its weak condition.
- The H&R Report will detail and fully describe the status and condition of the timber structure.

- The walls are constructed in fibrous plaster sections fixed to timber battens off the masonry walls. Our initial investigation showed that they are in a better condition than the ceiling having been less affected by water and damp. However, some further investigation should be carried out to assess the masonry for water penetration.

- Some of the ‘gold painted’ enrichments are made of composition and applied to the fibrous plaster soffit. The damp conditions have caused some sections of moulding to detach and are lost and missing.

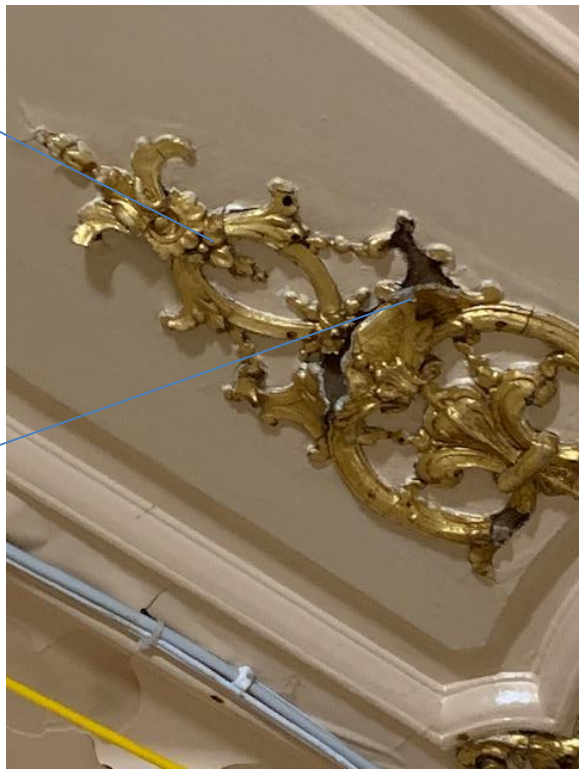


Clinker concrete soffit.

Timber battens secured with nails to the clinker soffit.

Unreinforced plaster wad securing dome and soffit to timber supporting

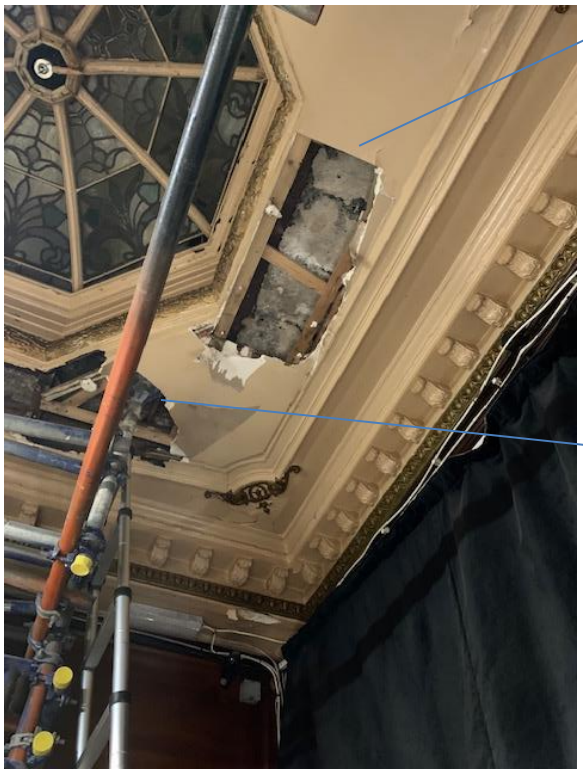
Decorative element of composition applied to beam soffit.



Section of detached composition detail.

G-17 Entrance Foyer.

- This area consists of three equal coffers rising to an octagonal skylight with a coloured glass dome. The downstand from the skylight is partially timber with a plaster leaf enriched frieze in relief to the perimeter.
  The plaster soffit is flat with a plain plaster moulding in relief with enriched quadrants to the perimeter. The cornice is a large modillioned enriched plaster moulding.
- Some damage has been caused to the plaster soffit by the insertion of supporting scaffolding in order to reach the concrete clinker behind. This loss of plaster has exposed the clinker soffit and the timber supporting structure. It was noted that some of the flat soffit has been 'repaired' with modern plasterboard which would indicate some earlier issues with water ingress.
- The existing plaster soffit appeared to be in a reasonable condition with fewer indications of water inundation and damp. Of greater concern was the timber supporting structure and its anchorage to the clinker concrete soffit which appeared to be in a fragile and weak condition. Some of these timber supports appeared to be contemporary with the plasterboard repairs.



3. Recommendations.

G-13 Entrance Hall.

- L&R and H&R are both of the opinion that the timber supporting structure should be viewed as redundant. (See H&R's Report). The condition of the fibrous plaster ceiling is poor but it has dried out in recent weeks and is essentially intact. Consequently L&R would recommend that the ceiling should be saved and restored. We would propose that the following methods and techniques be utilised to achieve this outcome:
    - Further sections of mainly plain panels of ceiling soffit are removed from the room perimeter. This would improve access to the back of the ceiling. Samples and squeeze moulds would be taken to ensure that these sections can be faithfully replicated and replaced.
    - Metal channel is securely fixed to the clinker concrete soffit where applicable to provide the means of introducing metal hangers down to the remaining sections of fibrous plaster.
    - Any dust and other debris is removed from the back of the plaster ceiling.
    - The remaining sections of the existing fibrous plaster ceiling is reinforced on the back with quadaxial mesh and gypsum plaster and secured to the new metal structure by means of wires and wads.
    - New fibrous plaster sections are cast from moulds and installed in place and made good to the existing sections where applicable.
    - Any missing and damaged enrichment is moulded, cast in plaster and fixed in place to match the existing.
- Further investigation of the wall plaster is undertaken with regard to water penetration to the masonry and timber fixings behind and to potential M&E works. Exiting holes/chases etc can be repaired and made good as applicable.

G-17 Entrance Foyer.

- Currently damage and loss of plaster fabric is confined to the flat soffit surrounding the octagonal skylights. L&R would propose that where applicable that these areas are repaired and restored as follows:

- Sections of plasterboard are to be carefully removed and replaced with new fibrous plaster sections. Any defective timber supports are to be removed and new metal channel installed to provide a secure fixing for the new plaster soffit.
- New relief plaster mouldings including decorative quadrant corners are to be replaced as applicable to match the existing.
- Cracks, holes and chases in the existing remaining plaster sections are to be repaired and made good. As required existing sections of plaster cornice would be re-secured with screws.

Date:

Simon Willcox MSc Building Conservation.

Signed ……
On behalf of Locker and Riley (FP) Ltd

Appendix A.

1. Copy of email sent 5th February 2020.

Simon Willcox

From:	Simon Willcox
Sent:	05 February 2020 12:49
To:	Shantanu Subramaniam; Francesca Cipolla
Cc:	Gary Buckley; Lauren Hewer
Subject:	kOKO Theatre.
Attachments:	EN 5385 Koko Fire Damage Q01.pdf

Good morning Francesca

Thank you for meeting me on site last week and for our tour of the building and those areas affected by the fire and its aftermath. As we discussed please find below our thoughts and comments on a strategy for the conservation and repair to the existing decorative plasterwork as follows:

- L&R had left site in late November 2019 as a consequence of the further discovery of asbestos in the ceiling void above the Auditorium dome. At the time of the fire on 6th January 2020 we were waiting for confirmation from the Main Contractor that their Asbestos Contractor had inspected the back of the dome and it was safe for our operatives to carry on their works to secure the fibrous plaster. In light of the fire and the inundation of the building of water from fireman's hoses etc it is essential that a thorough inspection by an approved and competent asbestos contractor is carried out. This inspection should include the ceiling void as well as the Entrance Halls and Foyers, Bar areas.
- We were able to view the damage caused by water ingress to the Entrance Hall, Foyer, Bar and other areas. Our current order and scope of works did not extend to these areas. The effect of the water ingress was widespread and substantial. The slope of the concrete slab above the Auditorium ceiling had directed the water flow to the front of the building. This had resulted in the collapse of sections of plain and decorative fibrous plaster ceilings and cornices. We observed that the water and damp was causing the paint to 'blister' on the surface of the plaster. It is likely that some sections of fibrous plaster were still retaining 'puddles' of water as they were unable to drain away and escape.
- We also observed the mould growth to the plaster surfaces and on the supporting timbers. It was proposed that a specialist be appointed to inspect the timber supports for fungal infections and to assess their suitability for retention following the water ingress.
- It was also proposed that a Structural Engineer carry out a survey to determine the suitability and condition of the existing structure following the fire and water inundation.
- We also expressed concern that it was essential to prevent further water ingress into the building from rain/snow.
- We understand that a contractor will be appointed to 'strip out' the carpets, debris and other areas affected by the fire and water. We noted that water and damp had affected the masonry walls behind the plaster. Consideration will have to be given to the removal of the wall covering and also the plaster to allow the masonry and the building as a whole to 'dry out'.
- We would propose that we carry out an inspection of the decorative plasterworks in all areas including the Auditorium ceiling void. This inspection should be carried out on completion of the 'strip out' and would identify those areas of plasterwork which could be retained and those sections which are so badly affected by the water and damp should be removed and replaced with new casts of fibrous plaster to match the existing. We would propose that any sections of plasterwork that have to be removed are labelled, photographed and stored in a dry place. In addition further samples and 'squeezes' of

1

sections of plaster can be taken to ensure faithful and accurate replication of the plasterwork. It is likely that retained sections of plasterwork will have to be further secured and reinforced to prevent further loss or damage.

We are attaching an estimate reference *EN 5385 Koko Fire Damage Q01* for carrying out the inspection and a PSUM for subsequently attending site and taking samples and 'squeezes'.

All rates are nett and are ex-VAT.

Our terms of trade are monthly account.

Please let me know if you have any queries on these proposals.

Kind regards

Simon

Simon Willcox

MSc Building Conservation.

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LOCKER & RILEY

ARTISANS IN PLASTER

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LOCKER & RILEY

Date:	3rd February 2020.	EN 5385 Koko Fire Damage	Q01		Author		Simon Willcox	
Item	Location	Description	Ref	Qty	Per	Rate	Total	NOTES/INSTRUCTION
		To supply and install the fibrous plaster/GRG as per the details provided and as listed below:					**BUDGET**	
	Koko							
	i	To attend on site and carry out inspection of the plasterwork to Auditorium and 'Front of House' areas. Provide a Report on the status and condition of the decorative plasterwork following the fire and water ingress.	item	-			£5,985.00	
				-			-	
	ii	To attend on site and take squeezes and samples as applicable of decorative plaster mouldings to Front of House areas. Record and label items and remove from site for safe storage.	PSUM				£7,000.00	Subject to review following site inspection.
				-			-	
				-			-	
		Sub Total					**£12,985.00**	
	Prelims							
		Mobile Towers	-	2.00	Wk	£140.00	£280.00	Allows for 1nr mobile tower.
		Access Allow for Irata qualified abseiler to be in attendance to ensure safe working in ceiling void.		1	Wk	£ 380.00	£380.00	Allow for attendance on site 1nr Irata qualfied person, 1nr weeks @ £380/8hour day.
		Supervision						
		Allow for weekly visits by Contracts Manager		2	Wk	£ 350.00	£ 4,200.00	Allow for weekly visits by Contracts Manager, @ £350 per visit
		To Collection					**£17,845.00**	

Schedule of Samples and Moulds taken from Koko Theatre

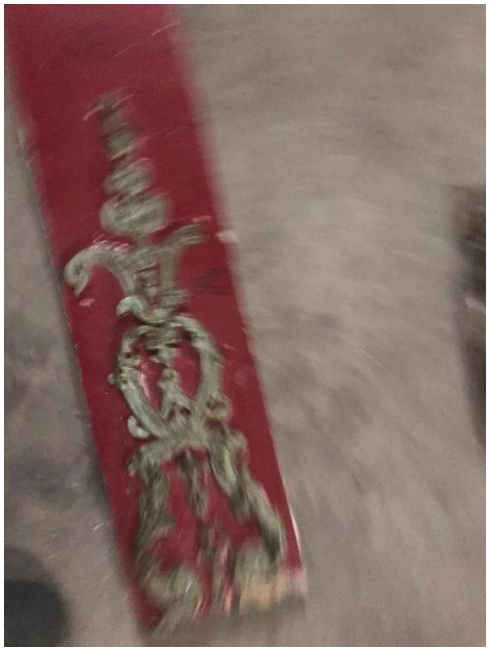
July/August 2020.

1. Room 1.14

a:- ceiling corner enrichments, A.

b :- enriched cornice, B

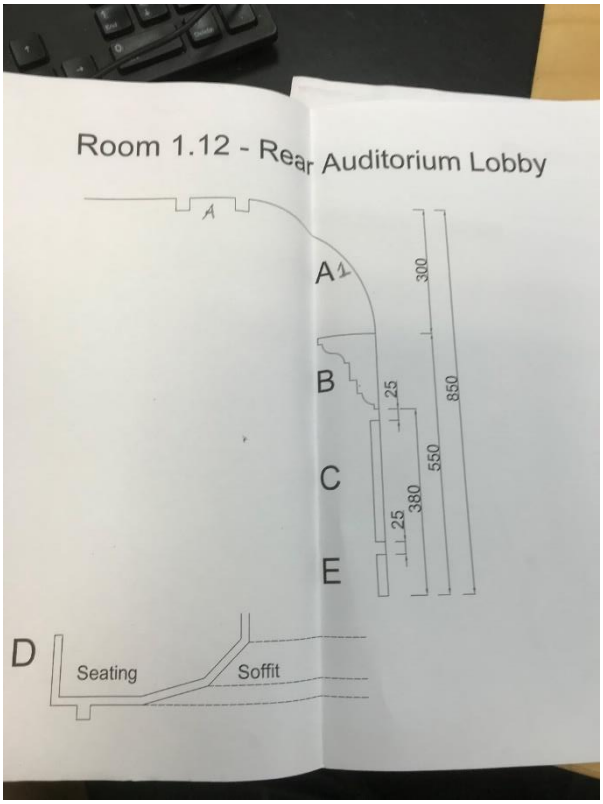
c:- beam soffit enrichments, C.



d:- Corner enrichments and plain panel moulding,D.

2. Room 1.12 Lobby at back of auditorium.

a. Site Notes.



b. Ceiling Band A.

c. Ceiling Cove A1.

d. Enriched Cornice B.

e. Swag & Drop Frieze C.

f. Plain Panel Moulding below frieze C1.

g. Enriched moulding at lower end of raking ceiling soffit D.

3. Room G11, Ground Floor between Entrance and Auditorium.

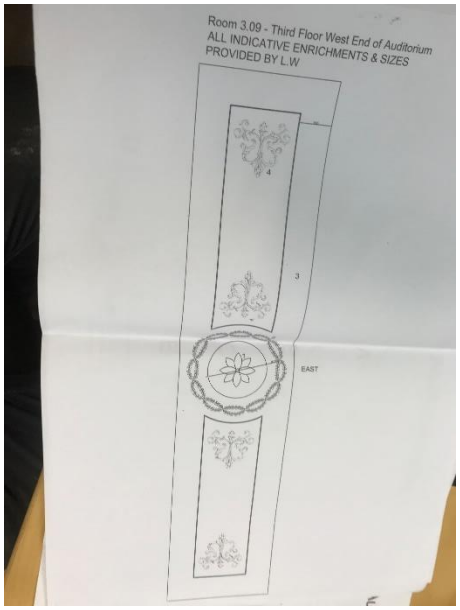
a. Plain arch section and profile A

b. Plain Pilaster section and profile B.

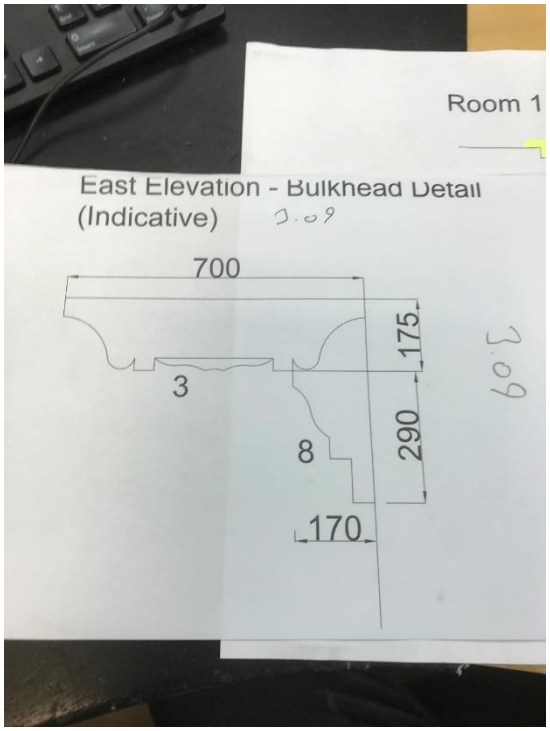
c. Egg and Dart Cornice C.

4. Room 3.09, Third Floor Western End of Auditorium.

a. Site Notes 1.



b. Sites Notes 2.



c. Plain run cornice , up to enriched beam N.E & W. elevations 8.

d. Central ceiling Rose A.

e. Circular beam case with egg and dart moulding, B.

f. Straight enriched beam case, C.

g. Scroll sunken panel and panel moulding, D.

h. Wall enriched panel moulding, E.