14 December 2021

Request for Official Information responded to under the Local Government and Official Information and Meetings Act 1987 (LGOIMA) (the Act) – reference: OIR 2122-133

I refer to your information request we received on 29 November 2021 for the following:

Otaki Civic Theatre

There was a property condition report that the work was based on that was done with the PGF money, so there will be a list of what was done and what needs to be done with the property team I'm sure. Can i have that list please, or a contact of someone in property who i can chase up for it.

Council response regarding your request

Please find attached the report information as requested.

Ngā mihi

Mike Mendonca
Acting Group Manager Place and Space
Te Kaihautū Takiwā, Waahi hoki

Building Condition Report

Address: Otaki Theatre, Otaki

Date: 27 March 2020

Project Number: 200057

Prepared for: Kapiti Coast District Council

Report Tracking – Otaki Civic Theatre

Revision	Status	Date	Author	Author's Signature
A	Final	27/03/2020	Steve Ransley ONZM, MNZIBS Registered BUILDING SURVEYOR	

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1. Introduction

Miyamoto Building Surveying Ltd (MBS) was engaged by The Kapiti Coast District Council on 5 February 2020 to undertake a Condition Survey and report on the Otaki Civic Theatre in accordance with the Miyamoto Building Surveying Ltd Proposal dated February 2020.

This report summaries the findings for the Otaki Civic Theatre, Otaki.

1.1 Scope of Works

The Scope of Work for the total project as identified in the MBS Proposal is:

Structural Engineer

A Structural Engineer is to undertake a visual assessment of the structural integrity of the main building components ie roof structure, concrete walls and sub floor. A brief report be produced outlining the findings of the visual inspection and advising whether the structure is still safe to use and outlining any major structural concerns. If not already done an IEP be undertaken as part of this process. If the IEP has already been completed the Engineer will review it along with his initial structural assessment.

Electrical

A registered electrician (Paul Pearce Electrical) will report on the following:

- Any potential electrical risks.
- General state of the electrical systems, fittings and fixtures.
- Compliance with current Electrical Regulations.
- Is there a requirement to upgrade to comply with current Regulations.
- What are the triggers that require an upgrade to be undertaken.

Fire Engineer

- Comments on the compliance of the building with the current fire regulations and whether there is any aspects that require urgent attention.
- Plan review (Floor plan provided by Miyamoto as none available on KCDC Property File).
- Written Fire Report.

Building Condition Report

The Building Condition report will address the following:

- Moisture ingress issues identified in the SPM Assessment
- Roof Assessment and remediation.
- External Doors and window assessment and remediation (roller door and timber windows)
- Remedial work and methodology required to address items identified as “Condition Grade 4 and 5” ie immediate non structural maintenance requirements.
- Remedial work and methodology required to address the deficiencies identified in the “Property Quality Standard” questions.
- Plumbing and drainage assessment.

1.2 Methodology

MBS adopted the following methodology for the assessment of the Otaki Theatre:

- Conduct a site visit to assess the condition of the building.
- Undertake a visual, non-intrusive investigation of the Unit.
- Take photographs for inclusion in the report.
- Prepare a report outlining our findings and recommendations, taking into account the New Zealand Building Act and relevant New Zealand Standards and Codes.

1.3 Site Visit

Visit was conducted on 17 Feb 20.

On site were:

- Building Surveyors. Steve Ransley and Mike Walsh of Miyamoto Building Surveying Ltd.
- Structural engineers. Greg Skartz CPEng, Eleanor Bigsby, Graduate Engineer

Further visits were conducted on 16 Mar 20.

Onsite were:

- Building Surveyor. Steve Ransley
- Fire Engineer

1.4 Property Description

The Otaki Theatre is an old movie theatre constructed in 1938 that is now being used as a performing arts venue by Otaki Players Society. The walls are poured in situ concrete. The roof is a timber trussed roof with bolted connections. The roofing is corrugated iron on the main roof and butynol over the veranda.

The windows and doors are timber and aluminium.

The floor is a suspended timber floor supported on internal piles and a concrete perimeter wall. The flooring is timber with a variety of floor coverings (carpet, vinyl and bare boards.)

The original building has been extended to the rear with a “lean to” timber structure clad in vertically fixed zincalum metal cladding and a corrugated iron roof.

The interior walls of the building are an adhoc mixture of bare concrete, painted concrete, plaster board, metal cladding and hard board.

The main auditorium ceiling is a suspended acoustic board (Pinex).

1.5 Areas Accessed

The entire building was accessed apart from the sub floor (the sub floor under the stage where access was available).

The main roof and lean to roof were viewed from the ground. The dutch gable behind the front fascade could not be viewed.

The butynol roof over the veranda was accessed and inspected.

The majority of the roof framing was accessed and inspected.

2. Observations

The building was assessed for it's general condition focussing on the category Condition 4 and 5 gradings as identified in the SPM assessment. The Fire and Structural reports are attached as Appendices to this report.

The electrician provided a summary (invoice) of work carried out in 2013.

2.1 Committee Room

The Committee Room is in good condition with no significant issues observed. No urgent remediation required.

2.2 Kitchen

The kitchen is in moderate condition.

An access hole has been cut in the floor and glued back in place creating a potential trip hazard. The main extractor is old and unhygienic.

The following remediation is recommended:

- Level flooring in the vicinity of the patch.
- Remove and replace vinyl to entire floor.
- Replace the extractor fan, ensuring it is vented to the exterior.

2.3 Female Toilets

The Female toilets are in poor condition.

Moisture ingress was observed coming through the exterior concrete walls. The stair nosing on the three stairs leading into the toilet and the step in the toilet are damaged and potential trip hazards.

There is no accessible access or grab rails in the toilet.

Of primary concern is the extent of moisture coming from the exterior and spalling the plaster off the walls.

The fittings and fixtures are old.

The following remediation is recommended:

- Remove spalling plaster and re plaster affected areas.

- Prepare and paint all walls to include hardboard.
- Prepare and paint ceilings .
- Remove and replace stair nosing.
- Prepare and paint exterior walls to seal and prevent moisture ingress.
- Install grab rail in toilets.

The work recommended above is the minimum requirement. Consideration should be given to refurbishing the toilets and including an Accessible capability.

2.4 Ticket Lobby

The ticket lobby is in moderate condition.

The paint and plaster on the ceiling are peeling and the plaster on the walls is cracked. Door hardware is broken or missing (door closers are missing and latches broken).

The following remediation is recommended:

- Ceiling. Remove damaged plaster and peeling paint. Re plaster, prepare and paint.
- Walls. Remove spalling and damaged plaster. Re plaster, prepare and paint.
- Door hardware. Repair and replace as required.

2.5 Inter Lobby

The inter lobby is in good condition with no significant issues observed. No urgent remediation required.

2.6 Sound Room

Locked and inaccessible. No key available.

2.7 Passage 1

The Passage is in moderate condition.

Cracking to the ceiling has occurred. The following remediation is recommended.

- Rake out cracks, tape and re plaster.
- Prepare and paint ceiling.

2.8 Auditorium

The Auditorium (Ground Floor) is in moderate condition.

The soft board ceiling is damaged and has multiple holes. Some sheets are loose and require refixing.

The timber flooring is in good condition however the polyurethane is in poor condition with excessive wear, marks and chips.

The following remediation is recommended:

- Refix, repair and replace loose and damaged soft board sheets on the ceiling.

- Repaint entire ceiling
- Sand, repair and polyurethane floor.

2.9 Auditorium Left Wing (Ground Floor)

The Auditorium Right Wing is in poor condition.

The soft board ceiling is marked and dirty. The wall linings have sheets missing or damaged.

The following remediation is recommended.

- Repair walls. Prepare and paint.
- Prepare and paint ceiling.

2.10 Auditorium Right Wing (Ground Floor)

The Auditorium Right Wing is in poor condition.

The condition observed is similar to the Left wing with damaged wall linings, marked and dirty ceilings, and damaged carpet.

The following remediation is recommended.

- Remove and replace carpet to stairs.
- Repair walls. Prepare and paint.
- Prepare and paint ceiling.

2.11 Stage

The central stage is in good condition with no significant issues observed.

The area underneath the stage is being used as a storage area so need to be fire proofed. Refer to the Fire Engineer's report.

In the stage wings there are three mezzanine storage areas. On the right side of the stage is a high level mezzanine storage area that appears to have been constructed when the theatre was originally built. In addition to the original high level storage area two lower level storage mezzanines have been constructed, one on either side of the stage.

For the mezzanine on the right side of the stage the following observations are made:

- The floor joists for the storage area are 200 x 50 supported at one end by joist hangars screwed to the outer wall and at the other end by joist hangars screwed to a 350 x 100 beam. The beam is supported by three 100 x 100 posts.
- The joist hangars are fixed with flooring screws. This is not in accordance with the manufacturer's recommendation. Either proprietary nails or 35mm tech screws should be used when fixing joist hangars.
- The posts supporting the beam are not continuous over their entire length.
- There are no mechanical fixings between the posts and beam.
- There are no mechanical fixing between the posts and floor.
- The single hand rail has a sheet of ply fixed to it to prevent falling however the hand rail and ply are not continuous along the entire edge of the mezzanine.
- The only access onto the mezzanine is by a ladder.

- The structure is not braced.

The following remediation is recommended:

- Replace the joist hangar fixings with proprietary fixings in accordance with the manufacturer's recommendations.
- Replace the posts and post to beam/floor fixings in accordance with a specific design.
- Construct a stair to access the mezzanine.
- Extend the handrail to comply with the NZBC Recommended Acceptable Solution F4 Safety from Falling.
- Confirm the load capacity of the floor.
- Confirm bracing requirements.

For the mezzanine on the left side of the stage the following observations are made:

- The mezzanine has not been constructed to a specific design.
- Floor joists are of varying dimensions with some being installed on their flat.
- The floor joists are supported on an undersized stringer bolted to the outside wall and a stage screen wall on the other side. The bolts securing the stringer are undersize.
- The stage screen wall supporting the stringer is not constructed as a load bearing structure.
- A post and beam system has been constructed towards the rear of the stage to enable access behind the stage and also support the storage area above.
- The handrail does not comply with the NZBC ie it is not continuous and has no intermediate rail.
- The structure is not braced.
- Access is by ladder.

The following remediation is recommended:

- The entire structure be dismantled and reconstructed in accordance with a specific design.
- Remove heavy objects stored on the structure

2.12 Red Room

The Red Room is in good condition.

There is a missing tile on the sink that has the potential to be a health and safety issue.

The following remediation is recommended:

- Replace missing sink tile.

2.13 Passageway 2

Passageway 2 is in good condition with no significant issues observed apart from extensive borer in the matched Rimu linings.

The following is recommended:

- Treat borer with a proprietary borer spray

2.14 Brown Room

The Red Room is in good condition with no significant issues observed. No urgent remediation is required apart from a replacing damaged door handle and treating the extensive borer in the Rimu matched linings.

The following remediation is recommended:

- Replace door handle
- Treat borer with a proprietary borer spray

2.15 Toilet 1 (Off Brown Room)

Toilet 1 is in good condition.

A detached ceiling lining has been repaired but not painted.

The following remediation is recommended:

- Paint ceiling linings (2 m2).

2.16 Green Room

The Green Room is in good condition.

The vanity is stained and unhygienic.

The following remediation is required.

- Remove and replace the vanity unit.

2.17 Toilet 2 (Off Green Room)

The Toilet 2 is in moderate condition.

The ceiling is unpainted and the vinyl is lifting. There is extensive borer in the Rimu matched linings.

The following remediation is required:

- Prepare and paint the ceiling.
- Remove and replace the vinyl.
- Treat borer with a proprietary borer spray.

2.18 Male Toilets

The male toilets are in poor condition.

There is moisture intrusion through the concrete walls affecting the interior plaster and causing the paint to bubble.

The fittings and fixtures are old and unhygienic. There are no Accessible features.

The following remediation is recommended:

- Remove damaged plaster and re plaster affected areas.
- Prepare and paint all walls.
- Prepare and paint exterior walls to seal and prevent moisture ingress.

The work recommended above is the minimum requirement. Consideration should be given to refurbishing the toilets with new fitting and fixture to include an Accessible capability.

2.19 Stairs

The Stairs are in moderate condition.

The carpet is a mixture of old and new. The old carpet has detached on one edge. One side of the door is polyurethane and the other side is painted

The painting to the walls and ceilings on the upper landing of a poor standard and does not appear to have been done by a competent tradesman.

The following remediation is recommended:

- Either remove and replace the old carpet but retain the newer carpet or refit the detached carpet.
- Prepare and paint the walls and door.

2.20 Managers Office

The Manager’s Office is in poor condition.

There are unfinished repairs to the walls and ceiling. The carpet is thread bare and worn. The door is damaged at the hinge side.

The following remediation is recommended:

- Remove and replace the carpet.
- Complete repairs.
- Repair door.
- Prepare and paint entire room.

2.21 No 14

The room at No 14 is in poor condition.

The ceiling has holes in it and the flooring (carpet and vinyl) is stained and damaged. Only a limited inspection could be made of the room as it is being used as a storeroom.

At minimum the following remediation is recommended:

- Repair holes in the ceiling.
- Prepare and paint the ceiling.
- Remove and replace vinyl.
- Remove and replace carpet.

2.22 Upper Auditorium

The Upper Auditorium is in moderate condition.

The carpet is worn on the stairs and areas of the floor are bare boards. The ceiling is a continuation of the main auditorium so also has holes and dislodged soft board sheets. There is a mixture of old and new seating. The old seating is in poor condition with holes and rips in many of the seats (The Otaki Plyers have spare seating to be installed but they may not have enough to replace all).

The following remediation is recommended:

- Remove and replace or repair damaged sections of carpet.
- Either sand, repair and polyurethane the exposed floor or lay carpet throughout.
- Replace damaged seating.
- Refix, repair and replace loose and damaged soft board sheets on the ceiling.
- Repaint entire ceiling.

2.23 Wardrobes

The wardrobe area is in poor condition.

The wardrobe area at the upper front of the building was originally the camera projection area when the building was a picture theatre. It is now a maze of rooms and alcoves storing large quantities of clothing and props. The wall and ceiling linings are a mixture of various materials and finishes. There are varying floor levels and floor finishes. The area has developed in an adhoc manner over time.

The following remediation is recommended:

- The tenant needs to decide what clothing and props they want to retain.
- The wardrobe area be redesigned to accommodate the Client's needs and the fire safety requirements.

3. External

3.1 Front Elevation

The front of the building opens directly on to the public foot path.

The following was observed:

- The soffits under the veranda are fibre cement sheet from the era when asbestos was commonly used in their composition. The sheets are broken and pose a health and safety risk.
- The stairs have a vinyl flooring laid on them. The vinyl is cracked and will require replacement. The cracking does not pose an immediate trip hazard.
- The main doors are timber and in good condition although to ensure their longevity it is recommended they be prepared and re polyurethened.

3.2 Right Side Elevation

The right elevation adjoins the outdoor dining area of the café next door. The walls are 8m high unpainted plastered over concrete.

The following was observed:

- There are fixings missing of the down pipes.
- The timber window in the Men's Toilet is in poor condition and needs replacing.
- Concrete is spalling and exposing the steel in the column above the fire exit doors.
- There is no head flashing above the fire exit doors.
- The sub floor vent towards the rear of the building requires replacing.
- The sub floor vents into the subfloor are below ground level and partially blocked.
- The cap flashing on the rear of the wall needs to be replaced as it has dislodged.
- Fascia requires preparing and painting.
- As the wall is unpainted it is not sealed and will allow moisture to penetrate. Evidence of moisture penetration can be observed inside the building. It is recommended the exterior be painted in order to prevent moisture ingress.

3.3 Rear Elevation

On the rear of the building there is a "lean to" structure housing the Red, Green and Blue Rooms. The structure is clad in a partially painted zincalum cladding. The windows are aluminum and the area above the lean to roof is the original unpainted plastered concrete building.

The following was observed:

- The cladding and windows are in good condition.
- The fascia board requires painting (remove spouting to enable painting).
- The unpainted concrete wall has the potential to allow moisture ingress into the building. It is recommended the exterior be painted in order to prevent moisture ingress.

3.4 Left Side Elevation

The left side of the building adjoins an open space. Along the left side is an Accessible ramp, fire escape stairs and a disused cargo door once used for loading large items into the back of the stage. The concrete "bunker" under the stairs is sealed off . It backs onto the Ladies toilet and may have once been an alternative entry.

The following was observed:

- The concrete stairs are dirty and a potential slip hazard. The stairs need to be cleaned and a non slip surface applied.
- Concrete is spalling and exposing the reinforcing steel. It is recommended that the steel be treated
- The cargo door has been sealed shut. The lintel above has spalling concrete with the reinforcing steel being exposed. It is recommended that the door be removed completely and the opening blocked of permanently with a concrete block infill
- The fire escape door at the top of the stairs has a rotten frame and is not weathertight. It is recommended that it be replaced with a new weathertight door.
- The louvre above the ground floor fire escape door is rotten. Replacement is recommended.
- The ground floor fire escape doors have been successively repaired over the years and should be considered for replacement with a weathertight pair of doors.
- Previous repairs have been made to the column on the rear of the building with the inclusion of steel strapping/reinforcing.
- As the wall is unpainted it is not sealed and will allow moisture to penetrate. Evidence of moisture penetration can be observed inside the building. It is recommended the exterior be painted in order to prevent moisture ingress.

4. Roof Assessment and Remediation

There are four areas of the roof to be considered:

- The main corrugated iron roof with dutch gable at either end.
- Butynol roof over the veranda,
- the corrugated iron roof over the rear "lean to" extension, and
- a concrete flat roof adjoining the emergency stair on the Western elevation.

The main roof was inspected from the ground. The dutch gable on the Southern end of the roof is obscured by the parapet above the butynol roof so could not be assessed.

The Butynol roof over the veranda was accessed and the "lean to roof" was inspected from a ladder.

The following was observed:

- The main roof and has extensive rust and a history of leaks.
- There are internal gutters on the Southern end of the main roof that could not be accessed or inspected. Internal gutters are considered high risk and must be regularly cleaned.
- The butynol roof is in poor condition with numerous patches having been applied.
- The internal scuppers on the butynol roof are blocked.
- The tie rods supporting the veranda are rusting and require repair/remediation.
- The barge boards on the gable ends of the main roof have areas of rot.
- The corrugated iron roof over the "lean to" is in good condition however the apron flashings between the main building and the roof have dislodged and have the potential to leak.

- The concrete flat roof falls back towards the main building. Grooves have been cut in it to channel the water away from the building.
- Barge boards and fascia require maintenance and painting.

The main roof is generally in poor condition and in need of repair or replacement. The barges on the gables are rotting and should be replaced. Although the internal gutters have not be inspected as they could not be accessed it is very likely that they will be in poor condition as they have not been regularly maintained. To repair and paint the main roof requires the entire area to be scaffolded. Scaffolding will be a significant cost and considering the life of the roof will not be significantly extended by painting only it is recommended that the main roof be removed and replaced.

The lower level butynol roof is in poor condition and requires replacing. It is recommended that the ply substrate be replaced at the same time as the butynol is being replaced.

The ties supporting the veranda are rusting and need to be cleaned, inspected and repaired as required.

The lower level flat concrete roof falls back towards the building. The bunker below the roof backs onto the ladies toilet so this is a potential source of moisture causing the moisture issues in the ladies toilet.

Attempts have been made to water proof the junction between the roof and wall with the use of sealants. Sealants are only a temporary fix. It is recommended that that the area be over roofed with a colour steel long run roof falling away from the building.

5. Plumbing and Drainage

As noted earlier, the plumbing fittings and fixtures in the male and female toilets, although functional, are old and unhygienic.

The original spouting is copper. Some sections have been replaced by PVC. The junction between the two dissimilar system on the right rear of the building leaks and discharges down the wall. There is evidence of moisture intrusion inside the building that potentially originates from this junction.

The down pipe on the left rear of the lean to extension discharges onto the ground. The down pipe on the front left of the building discharge onto the footpath. The remaining down pipes discharge into the storm water system.

The waste water pipes on the rear of the building are externally mounted and discharge into a gully trap. The gully trap is blocked with soil and debris so the waste water will overflow and discharging onto the ground.

The waste water from the Men's Toilet also discharges into a gully trap that is partially blocked so has the potential to over flow.

The following remediation is recommended:

- All down pipes be linked into the storm water system.
- The junction between the dis similar spouting systems be modified to eliminate the leaks.
- The gully traps be cleared of debris.
- The bathrooms be refurbished and new fittings and fixtures installed.

6. Electrical

The main building was rewire by Paul Pearce Electrical in 2013. The lean to structure was rewired by the Otaki Players electrician. No issues were observed with the electrical systems however Paul Pearce expressed concerns about the number of multi boxes being used and the potential for them to over load the circuits.

It is recommended that the Otaki Players be advised of the potential to over load and request they limit the use of multi boxes.

7. Fire Report

The Fire Report is attached as an Annex. The non compliant items noted in the report are:

- Bars securing fire doors should be removed.
- The underside of the stage and tiered seating should not be used as storage.
- The two sides of the lower auditorium seating is to narrow.
- The headroom on the stairs from the Auditorium Right Wing to the stage is to low.
- The fire doors from the Auditorium Right Wing to the carpark outside need to be fire rated or removed as it is a boundary wall.
- The Auditorium right Wing fire door is not included in the means of escape as it opens onto a neighbouring property. A legal agreement is required between the parties to have it included. *Note: the building is compliant for "means of escape" without including the doors.*

8. Conclusion

The building is in good condition considering it's age. With the exception of the main roof and butynol roof most of the deficiencies noted in this report can be rectified by a maintenance programme. The main roof and the butynol roof are in poor condition and require replacement.

The Engineer has determined that the building has no structural issues that need to be addressed as a priority however there are maintenance issues that if not addressed may affect the structural integrity of the building ie spalling concrete and rusting reinforcing steel.

There is water ingress into the building, particularly in the toilet areas. The water ingress can be remediated by painting the concrete exterior of the building to seal it against moisture intrusion.

The toilets are in poor condition and , although serviceable, are not sanitary as a would be expected of a public facility.

The adhoc mezzanine floors constructed on either side of the stage require attention as they are being used as storage areas and are accessed by personnel without adequate permanent access or fall protection.

The Tenant has undertaken successive upgrades of the building over the years to include seating replacement, rewiring, painting and decorating, creating storage areas etc. It is recommended that a coordinated approach between the KCDC and the tenant be developed to ensure the best utilisation of both organisation's funds.

The recommendations of the Fire Report be accepted and included in the refurbishment programme.

9. Recommendations

The following recommendations are made to address the priority issues affecting the building. Other issues identified in this report can be addressed as routine maintenance.

The following remediation is recommended for the exterior:

- The main roof and butynol roof be replaced. The ply substrate to the butynol roof be assessed once the butynol has been removed and replaced as required.
- Remediate the veranda tie rods.
- Replace the apron flashing between the rear concrete wall and the “lean to” roof. Retain the lean to roof.
- Internal gutter linings be replaced along with the roof cladding.
- Replace the flashing/capping on top of the right elevation wall.
- Repair or replace spouting to eliminate leaks.
- Paint or replace barges and fascia as required.
- Replace the timber window in the men’s toilet.
- Replace the louvre on the left elevation.
- Replace all fire exit doors with weather tight doors. Retain the front doors and repair as required.
- Replace the fire doors on the right elevation with two way fire rated doors.
- Remove the disused cargo door on the rear of the building and block in the opening.
- Clean gully traps.
- Redirect storm water into soak pits or storm water drains.
- Remove and repair spalling concrete.
- Clean fire escape steps and apply non slip surface.
- Refall or “over roof” the concrete roof over the “bunker” to eliminate moisture ingress into the ladies toilet.
- Prepare and paint the exterior to seal concrete against moisture intrusion.
- Test soffit under veranda for asbestos.

The following remediation is recommended for the interior:

- Remove and redesign the mezzanine storage area on the left side of the stage.
- Repair the mezzanine storage area on the right side of the stage by upgrading the fixings, upgrading the post and beam support structure, constructing a compliant fall protection system (hand rail) and constructing stairs.
- Refurbish the men’s and ladies toilets to include addressing moisture intrusion, installing accessible features and upgrading fittings and fixtures.
- Refix and decorate ceiling.
- Address issue noted in the Fire Engineer’s report.

10. Limitations

This report is subject to the following limitations:

- This report has been prepared by Miyamoto for the Client for the purpose/s agreed with the Client (Purpose). Miyamoto accepts no responsibility for the validity, appropriateness, sufficiency or consequences of the Client using the report for purposes other than for the Purpose.
- This report is not intended for general publication or circulation. This report is not to be reproduced by the Client except in relation to the Purpose, without Miyamoto's prior written permission. Miyamoto disclaims all risk and all responsibility to any third party.
- This report is provided based on the various assumptions contained in the report.
- Miyamoto's professional services are performed using a degree of care and skill reasonably exercised by reputable consultants providing the same or similar services as at the date of this report.
- The building assessments are based on visual building inspections only on the structural aspects, with no, or limited, intrusive inspections except as otherwise stated. Major structural elements have been reviewed where possible; however, this does not prove that latent defects do not exist. Minor structural repairs that may be required, as per general maintenance obligations, are outside the scope of this review. No material testing has been undertaken unless otherwise noted in the report. This report specifically excludes assessment or advice relating to hazardous materials, such as asbestos and weather tightness of the building envelope.
- Verification of structural elements is based on the information and drawings provided by the Client and available from archives and on our site inspection. The assumptions in this report are based on such information and drawings. Information or drawings not known to Miyamoto at the time of completing this report, which provide further and/or different detail, may affect these assumptions and the findings of the report.
- Where the Client provides information to Miyamoto, including design calculations and drawings of the as-built structure, or where the report indicates that we have obtained and/or relied upon information provided from a third party, Miyamoto has not made any independent verification of this information except as expressly stated in the report. Miyamoto assumes no responsibility for any inaccuracies in, or omissions to, that information.
- A change in circumstances, facts, information after the report has been provided may affect the adequacy or accuracy of the report. Miyamoto is not responsible for the adequacy or accuracy of the report as a result of any such changes.

Annex A. Photographs

Photo 1. Wardrobe storage

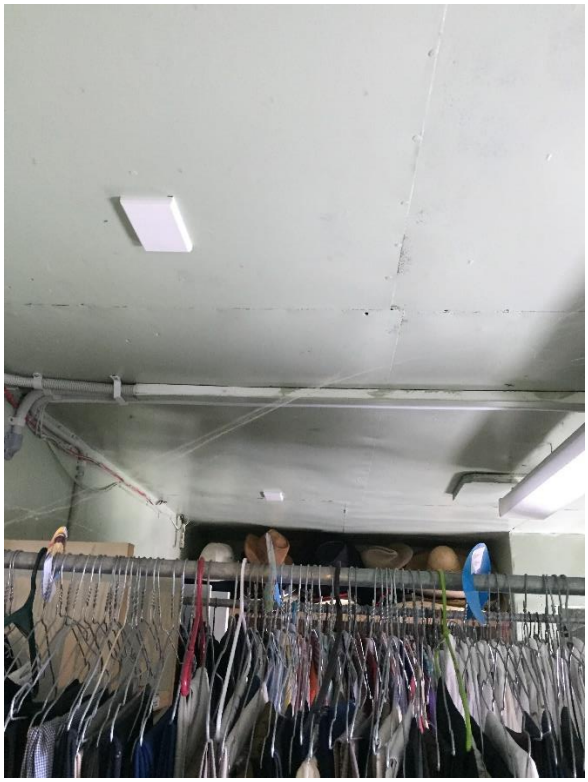

Photo 2. Wardrobe storage.

Photo 3. Carpet in wardrobe storage

Photo 4. Wardrobe storage

Photo 5. Wardrobe storage.

Photo 6. Wardrobe storage.

Photo 7. Old seating in upper auditorium. All other seating has been replaced. More seating held in storage to replace old seats.

Photo 8. Entrance lobby is in poor condition.

Photo 9. Ceiling has holes and dislodged sheets. Access to repair will be difficult due to height and tiered seating.

Photo 10. Moisture ingress from leaking spouting on NE corner of building.

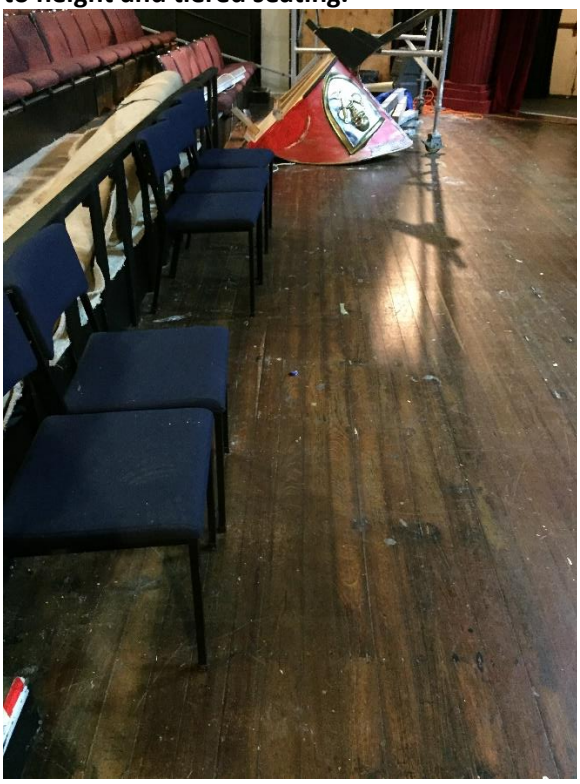

Photo 11. Floor in lower auditorium. Sand and re finish.

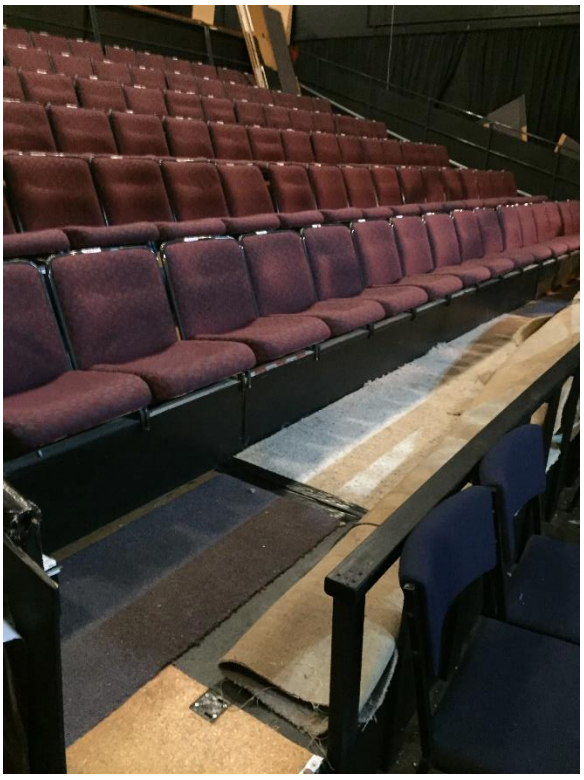

Photo 12. "New" seating from Wellington Civic Theatre.

Photo 13. Fire escape stairs. Clean and etch for slip resistance.

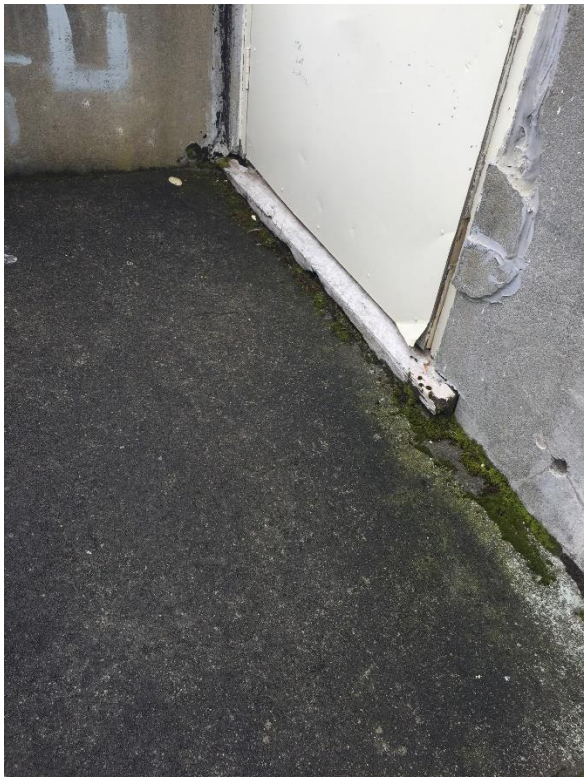

Photo 14. Damaged and repaired fire escape door from upper auditorium.

Photo 15. Fire escape doors from lower auditorium. Multiple repairs. Recommend replace with weather tight doors.

Photo 16. Rotten louvres on West wall. Replace.

Photo 17. Down pipe from butynol roof discharges on to footpath.

Photo 18.Dislodged flashing over lean to extension.

Photo 19. Rusting roof.

Photo 20. Leaking spouting on right rear corner.

Photo 21. Blocked gully trap on rear of building

Photo 22. Down pipe discharges onto ground on left rear of lean to extension.

Photo 23. Blocked guly trap from men's toilet

Photo 24. Disused door. Remove and in fill wall with concrete blocks.

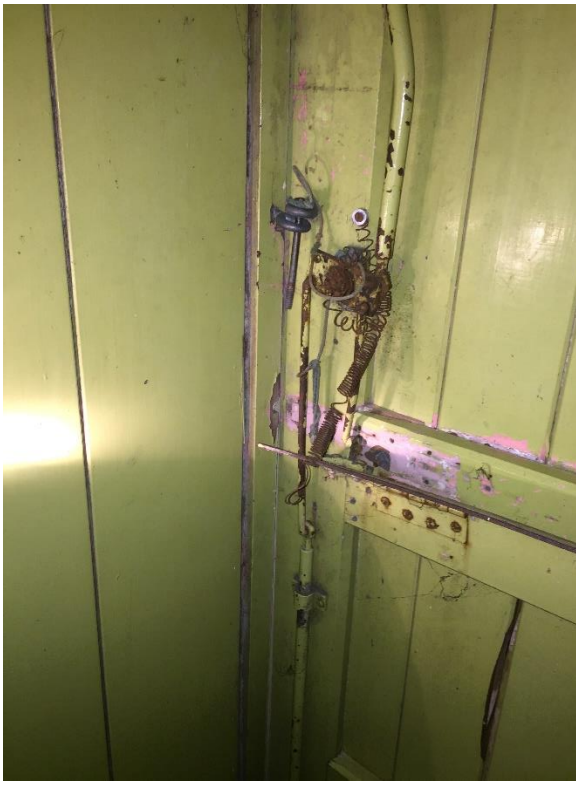

Photo 25. Lock on fire exit door from upper auditorium

Photo 26. Damaged carpet in upper auditorium

Photo 27. Right stage mezzanine. Incorrect fixings

Photo 28. Right stage mezzanine. Handrail not continuous.

Photo 29. Right stage mezzanine. Post not continuous.

Photo 30. Right stage mezzanine. Post not continuous.

Photo 31.Left stage mezzanine. No handrail. Adhoc construction.

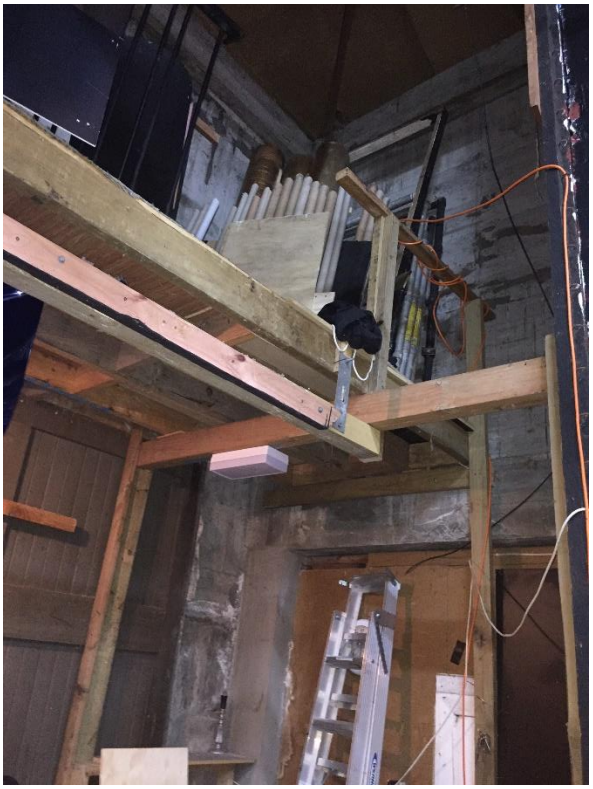

Photo 32. Left stage mezzanine. Adhoc construction.

Photo 33. Left stage mezzanine. Undersized floor joists and stringer.

Photo 34. Screen wall supporting mezzanine.

Photo 35. Soffit. Potential asbestos.

Photo 36. Front of building. Cracked vinyl on steps.

Photo 37. Window in men's toilet.

Photo 38. Right wall. Spalling concrete.

Photo 39. Right wall. Previous repairs.

Photo 40.Remove and replace flashing in top of wall.

Photo 41. Remove and replace vent.

Photo 42. Left wall. Source of moisture into ladies toilet. Over roof.

Photo 43. Butynol roof. Replace.

Photo 44. Butynol roof. Previous repairs.

Photo 45. Stay supporting veranda roof. Maintenance required.

Photo 46. Blocked scupper on butynol roof.

Annex B. Electrical Upgrade

paulpearce electrical
SWITCHED ON

GST # 73-012-074

CUSTOMER JOB NO. 4163

Kapiti Coast District Council
Accounts Payable
Private Bag 60601,
Paraparaumu 5254

Job No: 4163
Site: Otaki Civic Theatre
Site Contact:
Site Phone:
Salesperson: Andrew Bertram

Exit and Emergency Lighting - Quoted Works

To upgrade the Exit and Emergency lighting to the specifications supplied and in accordance with Thorn Lighting Ltd's engineers proposal for compliance with current Legislation and Standards.
Please note that our Emergency lighting proposal has been formulated without sighting the buildings Fire Report. Although we have requested KCDC to forward the latest report it has not arrived. Should the report ask for a different mythology to our plan then we must have the right to either reprice or withdraw our tender.
Several of the emergency light fittings are indent only ex Europe; delivery 12 - 14 weeks appropriately from order.

Part #	Item	Quantity	Unit Price	Total
	Install low voltage wiring as described	1.00	$493.80	$493.80
	To supply and install LED exit and emergency light fittings as specified by Thorn lighting.	1.00	$7005.00	$7005.00
	To test and commission works and to provide an operational manual as specified.	1.00	$398.40	$398.40
	To install wiring for the new fittings and replace non compliant wiring to the existing exit light outlets.	1.00	$6488.28	$6488.28
			Sub-Total ex GST	$14385.48
			GST	$2157.82
			Total inc GST	$16543.30

Section Sub-Total ex GST	$14385.48
GST	$2157.82
Section Total inc GST	$16543.30

Meter board and distribution boards. - Quoted Works

To replace the existing switch boards and sub main cables as specified.

Part #	Item	Quantity	Unit Price	Total
	Replace the switch/meter board and sub main for the S/East room	1.00	$1188.60	$1188.60
	To replace the switch/meter board and sub main for the S/West kitchen.	1.00	$1405.38	$1405.38
	To replace the distribution board and sub main for former projection room.	1.00	$1343.51	$1343.51
	Upgrade sub-main to sub-board.	1.00	$2177.85	$2177.85
	To replace the distribution board and sub-main for the Sound room.	1.00	$828.67	$828.67
	To replace the main switch / meter board.	1.00	$2836.98	$2836.98
	Pay fees to have pole fuses removed and / or reinstalled.	2.00	$78.00	$156.00
	Pay inspection fees.	1.00	$80.00	$80.00

paulpearce electrical
SWITCHED ON

GST # 73-012-074

CUSTOMER JOB NO. 4163

Meter board and distribution boards. - Quoted Works

Part #	Item	Quantity	Unit Price	Total
coc	Test installation in order to uplift Certificate of Compliance.	1.00	$20.00	$20.00
	Pay fees to have meters relocated	1.00	$140.71	$140.71
	To install new 100 amp mains and connect	1.00	$1779.22	$1779.22
			Sub-Total ex GST	$11956.92
			GST	$1793.54
			Total inc GST	$13750.46

Section Sub-Total ex GST	$11956.92
GST	$1793.54
Section Total inc GST	$13750.46

General wiring as per Specifications - Quoted Works

Electrical rewire as per specification

Part #	Item	Quantity	Unit Price	Total
	Electrical Rewire as per specification.	1.00	$7500.00	$7500.00
			Sub-Total ex GST	$7500.00
			GST	$1125.00
			Total inc GST	$8625.00

Section Sub-Total ex GST	$7500.00
GST	$1125.00
Section Total inc GST	$8625.00

Additional Items as requested - Quoted Works

Additional items as specified listed on page 7.

14.03.2013 (Paul Pearce)
Carry out inspection as required.

Part #	Item	Quantity	Unit Price	Total
	Portable scaffold	1.00	$5100.00	$5100.00
			Sub-Total ex GST	$5100.00
			GST	$765.00
			Total inc GST	$5865.00

Section Sub-Total ex GST	$5100.00
GST	$765.00
Section Total inc GST	$5865.00

Variation to the Contract

Removed from the contract.

Deduct item 1 Exit and emergency lighting.

paulpearce electrical
SWITCHED ON

GST # 73-012-074

CUSTOMER JOB NO. 4163

Part #	Item	Quantity	Unit Price	Total
	Exit and emergency lighting	1.00	$-14385.48	$-14385.48
			Sub-Total ex GST	$-14385.48
			GST	$-2157.82
			Total inc GST	$-16543.30
			Section Total	$-16543.30

Variation to the Contract

Removed from the contract.

Deduction in item 4.
Additional items as specified listed on page 7
due to changes in Otaki Players requirements.

Part #	Item	Quantity	Unit Price	Total
	Items as specified on Otaki Players list of additional requirements.	1.00	$-405.00	$-405.00
			Sub-Total ex GST	$-405.00
			GST	$-60.75
			Total inc GST	$-465.75
			Section Total	$-465.75

Thank you.

Sub-Total ex GST	$24151.92
GST	$3622.79
Total inc GST	$27774.71

Ph: Otaki: **06 364-6146** (All Hours)
Levin: 06 368-4716
Kapiti: 04 904-5146

Address: PO Box 154, Otaki 5560
Office: 88 Aotaki Street, Otaki

Fax: 06 364-8333
Email: admin@ppel.co.nz
Web: www.ppel.co.nz

Annex C. Engineer's Report

Structural Assessment Report

Address: Otaki Theatre, Main Street, Otaki 5512

Date: **27 March 2020**

Project Number: **200057**

Prepared for: Kapiti Coast District Council

Report Tracking – Otaki Civic Theatre, Main Street, Otaki 6015

Revision	Status	Date	Prepared by	Approved by
A	Final	27 March 2020	Eleanor Bigsby	Greg Szakats

Authorisation

Author's Signature		**Approver's Signature**	
Name	Eleanor Bigsby	**Name**	Greg Szakats
Title	Graduate Structural Engineer BSc(Civil), MEng	**Title**	Senior Structural Engineer, BE(Civil), CPEng, CMEngNZ, MIStructE

Miyamoto International New Zealand Ltd.
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175a Cuba Street, Te Aro, Wellington 6011
518 Colombo Street, Christchurch 8013
135 Broadway, Newmarket, Auckland 1023

www.miyamotointernational.co.nz

Executive Summary

Miyamoto International NZ Ltd was engaged by the Kapiti Coast District Council to undertake an inspection of the primary structural elements of the Otaki Civic Theatre on Main Street, Otaki.

This report outlines Miyamoto's observations and recommendations for maintenance works to treat the areas of ongoing deterioration.

Overall, Miyamoto assess that the Otaki Civic Theatre is in generally good condition for a structure of its age and general configuration. During our investigation, no major structural deficiencies were identified.

The most recent seismic assessment resulted in a seismic rating of 36%NBS. Based on a high-level review, Miyamoto assess that after more extensive investigations a more accurate seismic assessment could be prepared; however, the final rating is likely to remain with the *earthquake-risk building* range, that is 34% to 67% NBS. Given the overall condition of the building, we agree that a reduction for deterioration is not required. If a higher seismic rating is required, the theatre building will require strengthening.

This executive summary should be read in conjunction with the report in full and the limitations set out in Section 9.

Table of Contents

1. Introduction

Miyamoto International NZ Ltd was engaged by the Kapiti Coast District Council to undertake an inspection and assessment of the primary structural elements of the Otaki Civic Theatre on Main Street, Otaki in order to identify any structural deficiencies

Greg Szakats, Eleanor Bigsby, Steve Ransley and Mike Walsh of Miyamoto inspected the property on 13 February 2020. This report is limited to the main structural components observed during the site inspection; non-structural deficiencies are covered is a separate building condition report by Miyamoto, dated March 2020.

This report outlines the findings of our investigation, as well as opinions and recommendations given in our capacity as an independent engineering consultant. This report should be read in full and in conjunction with Section XX Limitations.

1.1 Brief and Task Completed

Miyamoto's instructions are to:

- Complete a visual assessment of the main structural components of the building
- Outline any structural deficiencies.

1.2 Methodology

Miyamoto adopted the following methodology for the assessment of the property:

- Review the documentation provided
- Visual inspection of the building focussing on the main structural elements
- High level assessment of the primary structural elements considering the New Zealand Building Act and relevant New Zealand standards and codes
- Prepare a report outlining our findings and recommendations.

1.3 Sources of Information

The following information has been reviewed as part of our assessment of the property:

- Initial Evaluation Procedure (IEP) by Spencer Holmes, dated 9 March 2016
- Detailed Seismic Assessment Report by Spencer Holmes, dated May 2016
- Building Condition Summary by Miyamoto, dated 24 January 2020
- The Kapiti Coast District Council property file, various dates.

2. Description of the Property

The structure was a purpose-built cinema, constructed in 1938. The building is now used as a theatre, with a front lobby, permanent stage and seating arrangement, and dressing/green rooms at the rear. The site is located along the main street of Otaki. The building is a standalone structure, with a park to the west and a parking lot to the east.

The structure has reinforced concrete external walls with a high stud ceiling, suspended timber floor, and pitched timber roof. The front lobby area has timber-framed internal walls with plasterboard linings with a concrete slab floor. There is a raised timber-framed stage and there are a number of additional timber structures around the stage to support the buildings function as a theatre.

Street Address:	Main Street, Otaki 6015
Legal Description:	Pt Section 61 & 62 TN OF Otaki
Area:	621 m^2
Slope:	Flat

Photo 1. Aerial view of the property (Source: Google Maps) (note: North shown is project North).

Gravity System

The gravity system for the structure consists of a timber truss roof supported by cantilevered concrete columns with concrete infill walls. The mezzanine level is supported by internal timber framed, lined walls.

Lateral Load Resisting System

The lateral load resisting systems for the building in the transverse direction consist of reinforced concrete columns tied to the roof trusses with a concrete bond beam connecting the top of the beams, and the end walls consist of reinforced concrete frames. In the longitudinal direction, the lateral load resisting system consists of timber bracing in the roof, the in-plane strength of the concrete walls and the out of plane strength of the concrete frames in the end walls.

3. Observations

MINZ observed and noted the damage in relation to the structural integrity of the buildings. We do not discuss non-structural damage unless it is an indication of possible damage to a structural element of the building. The findings of our investigation are summarised in the sub-sections below. Refer to Appendix A1 for photographs.

3.1 Roof Structure

Miyamoto was able to conduct a visual inspection of the roof framing through an access hole in the prop room and the roof framing was exposed over the stage area.

The roof framing consists of timber trusses, with timber struts and steel rod ties. There was a visible connection between the concrete columns and the timber trusses. Diagonal timber braces (which transfer longitudinal loads to the side walls) were present, spanning two bays. There was some evidence of borer in the roof space; we assessed that borer damage was minor and has not significantly reduced the strength of the timber members at this stage. No other significant damage to the roof structure was noted.

3.2 Subfloor

Miyamoto was able to conduct an inspection of the subfloor beneath the stage area and underneath the dressing rooms. The subfloor framing consisted of concrete piles and a concrete perimeter foundation wall. We were not able to observe the in-situ subgrade as the majority of the accessible subfloor was covered with a concrete slab.

The subfloor was generally in good condition, there was no cracking observed in the concrete piles or perimeter foundation walls, and no evidence of recent movement. There was some evidence of borer in the subfloor; however, the timber framing was generally in good condition. A limited visual inspection of the exterior face of the perimeter foundations revealed no signs of damage.

3.3 External Walls

The external walls of the theatre consist of reinforced concrete columns with concrete infill panels. Minor cracking was observed on the side elevations. There were larger cracks observed on the east elevation and in several locations the concrete had spalled off, exposing the reinforcing steel below.

3.4 Internal Walls

The internal wall finish was a combination of exposed concrete infill walls and plaster-lined walls. Minor cracking in the plaster finish was noted in the lobby, typically diagonal or vertical cracking extending from corners or openings for doorways.

Efflorescence was present in on the internal face of the concrete walls in several locations, including significant efflorescence in the women's bathrooms and low levels of efflorescence around the rear of the stage. There was no evidence of staining in the efflorescence that would indicate no corrosion of the reinforcing steel to date.

4. Assessment of Damage Observed

Miyamoto assess that the building is in generally good condition for a building of its age. There was no structural damage observed in the roof space or within the visible portions of the foundations and subfloor. Of the visible damage to the remainder of the structure, Miyamoto assesses the damage to be minor structural damage and any recommended repairs are to prevent future deterioration.

Miyamoto's opinion is the majority of the cracking observed to the external walls is likely the result of shrinkage cracking that has been exacerbated over time and does not compromise the structural integrity of the superstructure. The spalled concrete is not widespread, limited to the east elevation of the structure and spalling typically occurs near an edge or corner of the concrete. We assess the spalling likely occurred due to a combination of delamination between the reinforcing steel and/or porous concrete, long-term settlement of the foundations and minor movement and shaking over time. Miyamoto assess these localised defects do not compromise the structural system as a whole; however, we recommend the steel is inspected for corrosion and the mortar is reinstated to prevent further deterioration.

The cracking to the wall lining in the lobby was not widespread and we assess that this was likely caused by long term settlement and/or movement throughout the buildings lifetime and does not indicate a structural deficiency or bracing failure.

The presence of efflorescence in the bathroom and the rear concrete walls indicates moisture egress through the concrete wall; however, the absence of staining indicates no observed corrosion to date. Therefore, Miyamoto assess that the reinforcing steel is unlikely to have corroded, and the structural integrity of the wall has not been compromised. We recommend a low-permeability treatment to be applied to the wall to prevent future deterioration.

5. Discussion of Previous Reports

5.1 Building Condition Report

The building condition report by Miyamoto identified several potential risks that could impact the structural integrity of building, including roof framing members and moisture intrusion through concrete walls.

The report identified separated members in the roof framing over the stage area. Upon closer inspection, these timber members appear to be part of the stage backdrop and lighting support framing and are hung off the roof framing system, resulting in the visible separation between members. Therefore, the separation has no impact on the structural integrity of the roof framing.

The report also identified moisture intrusion through concrete walls in the foyer bathrooms and through the concrete walls at the rear, with visible efflorescence. Given there is no presence of staining in the efflorescence to date, Miyamoto's opinion is that this level of efflorescence has not impacted the structural integrity of the wall. However, further action may be required to prevent future moisture egress and reinforcement corrosion.

5.2 Initial Evaluation Procedure (IEP) and Detailed Seismic Assessment (DSA)

As part of our assessment, Miyamoto review an Initial Evaluation Procedure (IEP) and a Detailed Seismic Assessment (DSA) completed by Spencer Holmes in March 2016 and May 2016 respectively. The IEP gave the building a score of 15% of a new building standard (NBS), identifying the building as potentially earthquake prone. The DSA assessed the building as having seismic rating of 36% NBS, with the critical structural weakness being a soft storey mechanism in the end wall concrete frames. For their assessment, they assumed a site class D, no roof bracing, the concrete columns were cantilevered, and the load bearing walls were supported by a foundation beam.

We note the limiting factor in the DSA was shear in the lower level columns of the concrete end wall frames. It may be worthwhile completing further assessment as this is not the typical critical structural weakness of a reinforced concrete structure of this era. Additionally, the DSA assumed the columns were cantilevered with the foundations providing a fixed base; Spencer Holmes do not discuss how they arrived at this assumption as no structural drawings were provided. Further investigation into the foundations could be valuable as the out-of-plane behaviour of the reinforced concrete columns would be heavily dependent on the foundation system.

We also noted substantial cross bracing in the roof whereas Spencer Holmes had assumed there was no roof bracing.

However, we assess that the score would be unlikely to substantially increase with further investigation, and the structure would likely remain within the earthquake risk category 34% to 66% NBS.

6. Overall Assessment

Overall, Miyamoto assess that the Otaki Civic Theatre is in generally good condition for a structure of its age and general configuration. During our investigation, no major structural deficiencies were identified. Given the buildings current condition, we would not apply a reduction for deterioration, were we completing a DSA.

The building has been previously assessed to have a lateral load capacity of 36% NBS and further investigation may result in an amended rating; however, we assess the rating is likely to remain in the earthquake-risk category of 34% to 67% NBS. If a higher rating is required, the theatre building will require seismic strengthening.

We recommend minor structural deficiencies outlined in Section 8 are repaired and the building is monitored for any on-going deterioration or movement.

7. Further Investigations and Assessments

Miyamoto assess that further investigation any main structural elements to address major structural deficiencies is not required at this time.

We note that it may be worthwhile to complete further investigations to achieve a more accurate seismic rating of the structure. These investigations should include a foundation assessment, including foundation depth and rebar content, and the rebar content of the reinforced concrete elements. This will allow for a more detailed assessment of seismic performance of key structural elements including the cantilever concrete columns and the end frame walls.

The most recent seismic assessment resulted in a seismic rating of 36%NBS. Based on a high-level review, Miyamoto assess that after more extensive investigations a more accurate seismic assessment could be prepared; however, the final rating is likely to remain with the *earthquake-risk building* range, that is 34% to 67% NBS. Given the overall condition of the building, we agree that a reduction for deterioration is not required. If a higher seismic rating is required, the theatre building will require strengthening.

Miyamoto would be please to provide a fee proposal for a revised detailed seismic assessment and to prepare a concept strengthening scheme. After the concept scheme, we would be happy to assist you through the process of strengthening the theatre.

8. Recommended Repair Works

We recommend the following remedial actions:

- The cracked and spalled sections of the external walls to be broken out, the reinforcing steel check for corrosion and the concrete repaired with a reinstatement mortar to maintain the structural integrity of the wall and prevent future deterioration.
- The walls displaying high levels of efflorescence should be treated with an appropriate low-permeability treatment to slow moisture egress and prevent future corrosion of the reinforcing steel. Any efflorescence should be monitored for staining or future evidence of deterioration.
- We recommend the roof and sub-floor spaces be treated for borer; a specialist should be consulted for further details.

Miyamoto recommends the building is monitored following any repairs to note any new movement or damage.

9. Limitations

This report is subject to the following limitations:

a) This brief report (Report) including appendices has been prepared for the Client for the purpose/s agreed with the Client (Purpose). Miyamoto accepts no responsibility for the validity, appropriateness, sufficiency or consequences of the Client using the report for purposes other than for the Purpose. In preparing the report Miyamoto conducted a brief, visual, non-invasive site inspection on the 13 February 2020.

b) Miyamoto has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Kapiti Coast District Council (Client) and only those third parties who have been authorised in writing by Miyamoto to rely on this Report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report.

c) This Report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose.

d) This Report was prepared in March 2020 and is based on the conditions encountered and information reviewed at the time of preparation. Miyamoto disclaims responsibility for any changes that may have occurred after this time.

e) Where this Report indicates that information has been provided to Miyamoto by third parties, Miyamoto has made no independent verification of this information except as expressly stated in the Report. Miyamoto assumes no liability for any inaccuracies in or omissions to that information.

f) To the extent permitted by law, Miyamoto expressly disclaims and excludes liability for any loss, damage, cost or expenses suffered by any third party relating to or resulting from the use of, or reliance on, any information contained in this Report. Miyamoto does not admit that any action, liability or claim may exist or be available to any third party. It is the responsibility of third parties to independently make inquiries or seek advice as required.

Appendices

A.1: Photographs

Figure 1 building view from the street.

Figure 2 shows cracking in the lining of the lobby.


Figure 3 shows cracking in the lining of the lobby.

Figure 4 shows the concrete frame at the rear.

Figure 5 shows the truss column connection.

Figure 6 shows the roof framing.

Figure 7 shows the sub-floor foundation wall and efflorescence.

Figure 8 shows the subfloor under the stage

Figure 9 shows spalling on reinforced concrete column.

Figure 10 shows cracking on the underside of a bond beam.

Figure 11 shows spalled concrete with exposed reinforcement and fine cracking.

Figure 12 shows spalled concrete on a reinforced concrete bond beam.

Annex D. Fire Report

VISHNU FIRE SAFETY

Fire Safety Assessment

Otaki Performing Arts Theatre Building

16 Main Street
Otaki

Reference	Revision	Date	Comment
20029R01	-	27th March 2020	

INTRODUCTION

This assessment has been undertaken in order to review the existing Otaki Performing Arts Theatre building located at 16 Main Street, Otaki and report on the fire safety requirements of the NZ Building Act 2004 and New Zealand Building Code (NZBC).

FIRE ENGINEERING DESIGN PHILOSOPHY

This assessment has been undertaken in accordance with the requirements of the NZBC Acceptable Solutions C/AS2 (Fire Safety - 2019), F6/AS1 (Visibility in Escape Routes), F7/AS1 (Warning Systems) and F8/AS1 (Signs).

FIRE AND EMERGENCY NEW ZEALAND (FIRE SAFETY, EVACUATION PROCEDURES, AND EVACUATION SCHEMES) REGULATIONS 2018 AND HAZARDOUS SUBSTANCES AND NEW ORGANISMS ACT (HSNO)

This fire safety assessment does not take into consideration the requirements of the "Hazardous Substances and New Organisms Act" (HSNO) or the "Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018". It is important that the owners understand their requirements to comply with these legal documents.

A copy of the above Act and Regulation is available free of charge from http://www.legislation.govt.nz

The owners / tenants should also confirm whether an evacuation scheme for the building is required to be lodged (if not already) to Fire & Emergency NZ. Please visit https://onlineservices.fire.org.nz/home/evacuationschemes for further information.

BUILDING DESCRIPTION

The existing Otaki Theatre building is single storey and has an intermediate floor (used as wardrobe) located at the top of the tiered seating. The buildings main structure is concrete and is used for live performances predominantly by the Otaki Players Society.

BASIS OF REPORT

This assessment has been based on the drawings forming Appendix 1 of this report as well as a site visit undertaken on the 16th of March 2020.

PART 1: GENERAL

Risk group

The primary Risk Group for the building is CA in accordance with Table 1.1, C/AS2.

Design occupancy

The design occupancy for the building is calculated below in accordance with Table 1.2, C/AS2.

Design Occupancy			
Activity	**Occupant Density (m^2 / person)**	**Floor Area (m^2)**	**Occupant Load**
Ground			
Tiered seating	204 seats		204
Stage	0.8	33	42
Dressing rooms	Used by persons counted elsewhere		0
Mezzanine wardrobe / storage	100	39	1
Ancillary areas	Used by persons counted elsewhere		0
Building Total			**247**

PART 2: FIRECELLS, FIRE SAFETY SYSTEMS AND FIRE RESISTANCE RATINGS

Firecells

The entire building is a single firecell.

Fire resistance ratings

The following are the life and property fire resistance ratings for the building

Fire Resistance Ratings (FRR)		
Risk Group / firecell	**Life rating**	**Property rating**
CA	60 minute FRR	120 minute FRR

Life rating: The fire resistance rating to be applied to elements of construction that allows movement of people from their location in a building to a safe place.

Property rating: The fire resistance rating to be applied to elements of construction that allows for protection of other property.

The various elements required to satisfy the above are covered later in this assessment.

Escape height

The building will have a less than 4m escape height

Fire safety systems

A Type 2 manual fire alarm system is required within the building in accordance with Table 2.2b of C/AS2 and this system is present. It is required to have a direct connection to the Fire Brigade and a fire alarm technician should be consulted to confirm this is present.

A Type 18 fire hydrant system is not required as the height from Fire and Emergency New Zealand vehicular access to any floor is less than 15 m and Fire and Emergency New Zealand hose run distance to any point on any floor is less than 75 m, as measured from Fire and Emergency New Zealand vehicular access.

PART 3: MEANS OF ESCAPE

Number of escape routes

The building has a minimum of two escape routes that terminate at a safe place satisfying the requirements of Table 3.1 of C/AS2. The eastern exit door is not included in this or the subsequent "means of escape" calculations as it opens onto neighbouring property and therefore is not a compliant exit. A legal agreement could be undertaken with the neighbours in order to make this exit legally compliant, however this would also need to be approved by the local Council.

Escape route width

Individual escape routes

The minimum width required for the individual escape routes are indicated in the Table 3.1a of C/AS2 below.

Minimum escape route clear widths required Risk Groups CA – C/AS2		
Escape type	**Escape route width**	**Door width**
Non-fire rated horizontal escape routes / corridors[1.]	850mm	760mm
Non fire rated stair	1000	760mm
Fire rated (external) stair[1]	1000	875mm
Notes: 1. The escape width may have minor projections such as handrails, signs, switches, fire alarm sounders. Handrails shall not project more than 100mm into the escape route width. (3.3.6, C/AS2) 2. Where the door is a double door, each leaf shall be no less than 500mm wide. (3.15.5, C/AS2)		

The existing satisfy the above requirements.

Combined escape routes

The combined horizontal egress width from the building is required to be a minimum of 1729mm for horizontal travel (257 persons x 7mm per person) and this is satisfied by the existing even after the widest exit (front doors) are discounted

The vertical stairs (internal and external) only serve the top section of the tiered seating only (83 seats) and satisfy the egress width requirements outlined in Table 3.1a of C/AS2 above.

Height of escape route

C/AS2 requires that escape routes shall have height clearances complying with Table 1 (below) of clause D1/AS1 – Access of the NZBC. Safe minor projections in accordance with Section 1.5 of D1/AS1 are permitted as indicated in Figure 4 below, however light fittings less than 1600 mm above the floor (if any) need to be recessed into the wall.

Minimum escape route height required (from Table 1, D1/AS1)	
Escape type	**Height Clearances**
Prone access spaces (e.g. sub-floor access limited length)	450mm
Crawl spaces for servicing (30 m max length)	800mm
Pedestrian access routes (unlimited length)	2100mm
Landings, stairways and corridors (less than 2 m in length)	2000mm

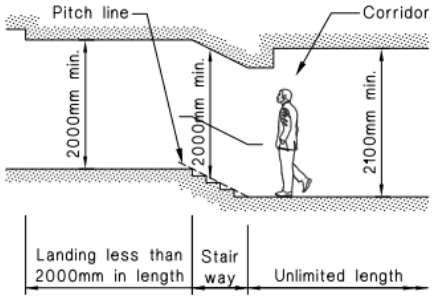


Figure 3 from D1/AS1 – height clearances

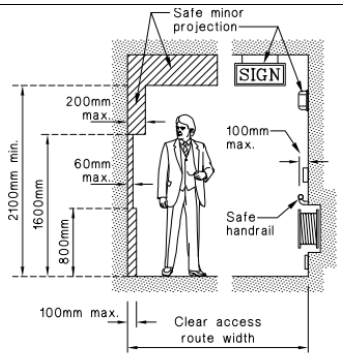


Figure 4 from D1/AS1 – safe minor projections.

The eastern corridor leading from the stage area does not satisfy this requirement near the steps (photo below).

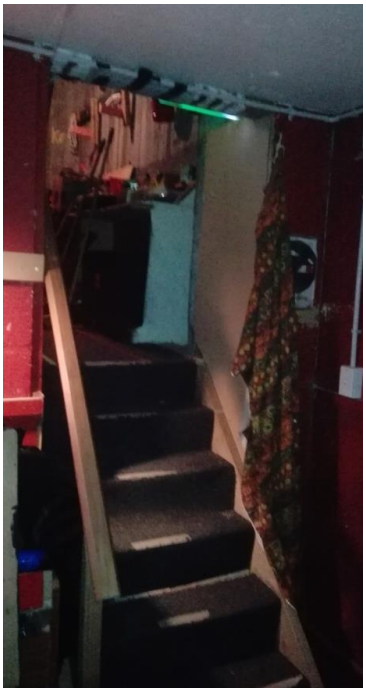


Photo 1: showing height clearance from top of stair to ceiling does not satisfy requirements

Tiered / Fixed Seating (paragraph 3.7.4, C/AS2)

Tiered / fixed seating is required to satisfy the requirements of paragraphs 3.7.4 to 3.7.10 of C/AS2 outlined below.

Fixed seating, which includes seating that is moveable or foldaway, shall be arranged so that:

a) Direct access to the aisles is available

b) The number of seats in a row is no greater than that specified in Table 3.3, C/AS2

c) The clear walkway width between rows is no less than that specified in Table 3.3, C/AS2, and

Direct access to aisles is available. The seat aisles are minimum 365mm and the number seats per aisle satisfy the requirements of Table 3.3 below.

Table 3.3	Walkways in fixed seating Paragraph 3.7.4	
Minimum walkway width (mm)	Maximum number of seats in any row	
	One aisle	Aisles both sides
300	7	14
340	9	16
380	9	18
420	10	20
460	11	22
500	12	24

Table 3.3 of C/AS2, NZ Building Code.

Seat widths

The seat width must be at least:

i) 500 mm where arms are provided and
ii) 450 mm where arms are not provided.

The existing seats satisfy the above requirements

Aisles (paragraph 3.7.7, C/AS2)

Aisles serving fixed or loose seating shall provide access to final exits or escape routes. The width of the final exits or escape routes shall be the greater of the:

a) Aisle width as required by Paragraph 3.7.8, C/AS2 or
b) Width required by Paragraph 3.3.2, C/AS2 (being 7mm/ persons)

Aisle widths (paragraph 3.7.8, C/AS2)

Aisle widths shall be no less than:

a) 750 mm when serving up to 60 seats
b) 900 mm when serving over 60 seats on one side only, or

c) 1100 mm in all other cases.

The aisles on the upper section satisfy this requirement. The two side aisles available on the lower section of tiered seating are 540mm wide each and therefore do not satisfy the above requirements.

Cross aisle (paragraph 3.7.9, C/AS2)

Each cross-aisle shall have a width of no less than that of the widest aisle it serves plus 50% of the sum of the widths of all other aisles served. The cross aisles satisfy this requirement.

Travel distance (paragraph 3.7.10, C/AS2)

The travel distance from any seat to a final exit or exitway shall be no greater than allowed for an open path in Table 3.2, C/AS2. This requirement is satisfied.

Safety from falling from aisles (paragraph 3.7.11, C/AS2)

Any side of an aisle that does not provide access to seating shall have barriers complying with Acceptable Solution F4/AS1 and handrails complying with Acceptable Solution D1/AS1. This requirements is satisfied.

Steps and landings in aisles (paragraph 3.7.12, C/AS2)

Steps in aisles shall have equal riser heights and equal tread depths, both complying with the requirements of Acceptable Solution D1/AS1. Landing lengths in aisles shall be equal in each block of seating between cross-aisles, but may be less than the minimum length required by Acceptable Solution D1/AS1.

Escape route length

The following are the allowable and actual worst case escape distance from the building in accordance with Table 3.2, C/AS2.

Allowable Escape Distance		
	D.E.O.P	T.O.P
CA	20m	50m
Actual Escape Distance		
	D.E.O.P	T.O.P
Ground	5m	44m
Intermediate floor	3m	30.5m

The actual escape distances from the building are within the allowable maxima.

Panic fastening

Panic fastening shall be fitted to the exit doors serving more than 100 persons in accordance with paragraph 3.15.12, C/AS2.

Panic fastenings are locking devices which shall meet the following requirements:

a) The actuating portion shall consist of a horizontal bar or panel which shall extend across no less than half the width of the door leaf and shall be located between 800 mm and 1200 mm above the floor, and

b) When a horizontal force of that able to be applied using one hand is applied to the bar or panel, the door lock shall release allowing the door to swing open freely.

Panic fastenings are provided to the exit doors where locks are present, however bars used to secure the doors should be removed (see photo below).

Photo 2: showing bars used for security which need to be removed.

Exit signage

Illuminated exit signs are provided along the escape routes in accordance with clause F8/AS1.

Doors on escape route

Exit door locks are required to be;

- be clearly visible,
- located where such a device would be normally expected,
- designed to be easily operable from the inside in an emergency without the use of a key or other security device,
- allow the door to be opened in a normal manner

As mentioned earlier, bars used to secure the exit doors should be removed as per photo 2 above.

Emergency lighting

Emergency lighting is required to to illuminate any changes in level and escape distances exceeding the initial 20m in accordance with F6/AS1. A lighting engineer shall be consulted to confirm the existing emergency lighting satisfies the requirements of F6/AS1.

PART 4: CONTROL OF INTERNAL FIRE AND SMOKE SPREAD

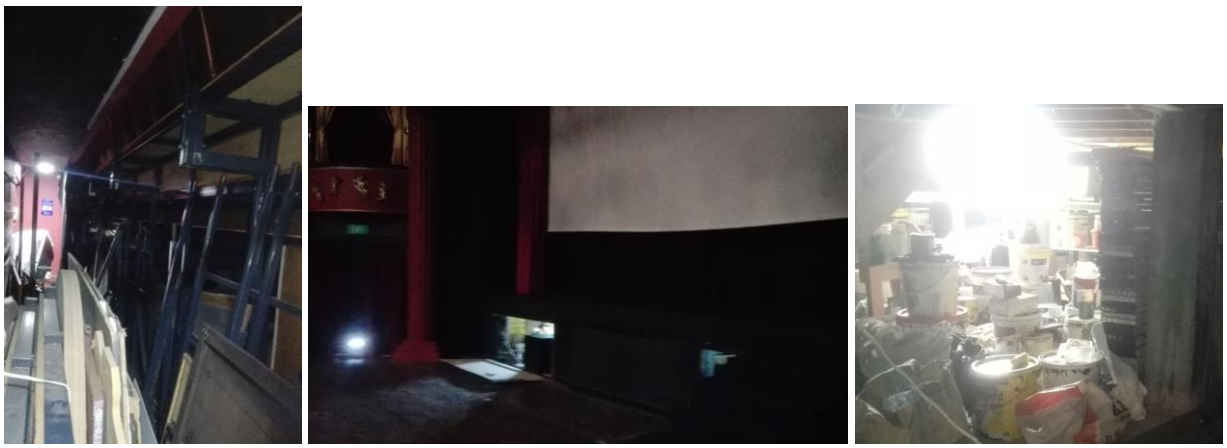
Intermediate floor

The mezzanine floor is approximately 42m^2 which equates to 9% of the ground floor (515m^2). This satisfies the requirements of the Acceptable Solutions.

The underside of the mezzanine floor and stairs as well as their support structures are required to achieve a fire resistance rating of 30 minute FRR. The existing construction cannot be ascertained fully and therefore it is uncertain if this requirement is satisfied..

Fire rating under auditorium seating and stage

The underside of the auditorium tiered seating including stage if it is capable of being used, shall be a 60 minute firecell in accordance with paragraph 4.8.1, C/AS2. The existing is not fire rated and therefore the underside of the tiered seating and stage shall not be used for storage.



Photos 3, 4 & 5: showing storage below tiered seating &stage. These items shall be removed.

Interior surface finishes

All internal surface finishes (paints etc) on ceilings and walls are required to satisfy the group number requirements of Table 4.3 of C/AS2 as summarised below;

Surface Finishes	
Location	**Group Number**
Public spaces	2S or lower

Suspended flexible fabrics

Any suspended flexible fabrics (curtains etc) shall have a flammability index of no greater than 12 when tested to AS 1530 Part 2.

Flooring

Any flooring (such as carpets etc) shall be non-combustible or satisfy the requirements of Table 4.5 of C/AS2, summarised below;

Critical Radiant Flux Requirements for Flooring	
Area of Building	**Minimum Critical Radiant Flux When Tested to ISO 9239-1**
Throughout building	2.2kW/m^2

The compliance of the existing surface finishes, suspended fabric and flooring with the requirements above was unable to be ascertained.

PART 5: CONTROL OF EXTERNAL FIRE SPREAD

The building is of solid concrete construction and is considered to satisfy the 120/120/120 FRR requirements for the external walls. However the exit door on the eastern side being on the boundary is required to be a fully compliant fire door achieving a 120 minute FRR. Alternatively it could be removed and replaced with a two-way 120/120/120 FRR fire wall by way of a Building Consent.

PART 6: FIRE FIGHTING

Fire service vehicular access

Fire service vehicular access is available within 18m of the building and this satisfies the requirements of the Acceptable Solutions.

SUMMARY

Below is a summary of the non-compliances within the building and which shall be rectified. They're listed in the order in which we believe are most important.

1. The bars used to secure the exit doors should be removed.
2. The underside of the tiered seating and stage shall not be used for storage as outlined on page 11 of this report.
3. The two side aisles from the lower section of tiered seating are 540mm wide each and therefore do not satisfy the requirements outlined on page 7 & 8 of this report.
4. The eastern corridor near the top of the side stage steps does not satisfy the height clearance requirement as outlined on page 6 of this report.
5. The eastern exit door is required to be a fully compliant fire door achieving a 120 minute FRR. Alternatively it could be removed and replaced with a two-way 120/120/120 FRR fire wall (by way of a Building Consent)
6. The eastern exit door is not included in this "means of escape" calculations as it opens onto neighbouring property and therefore is not a compliant exit. A legal agreement could be undertaken with the neighbours in order to make this exit legally compliant, however this would also need to be approved by the local Council.

Report Prepared by

Vishnu Fire Safety Limited

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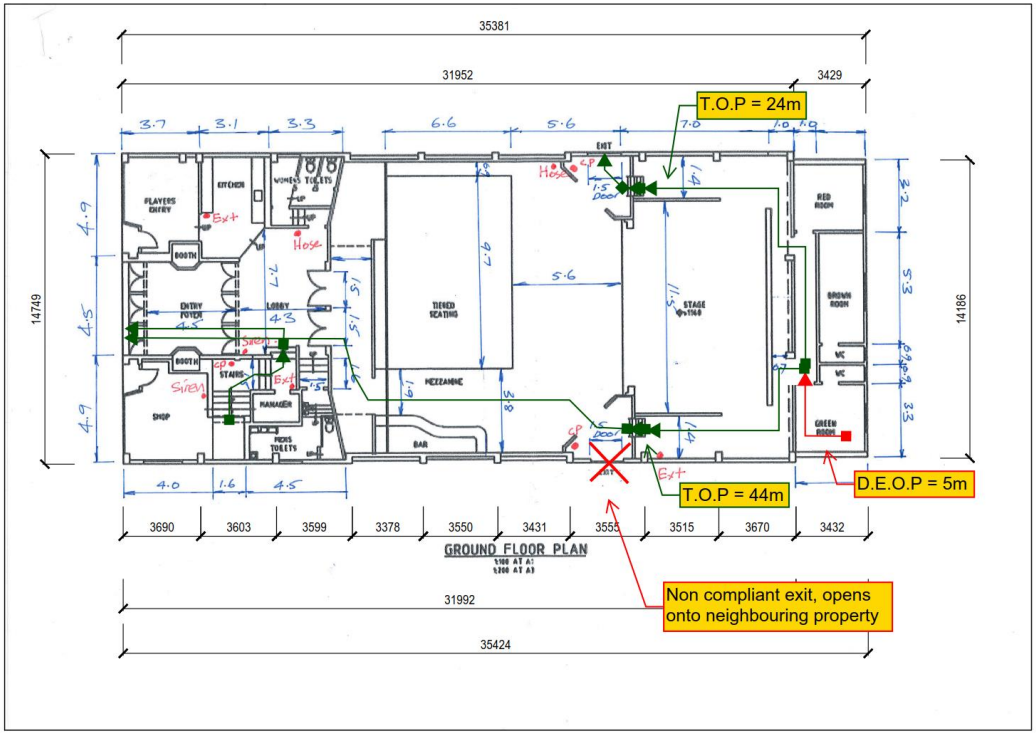
APPENDIX 1

DRAWINGS



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SITE SURVEY DRAWINGS FOR ADDRESS, SUBURB, CITY POSTAL CODE

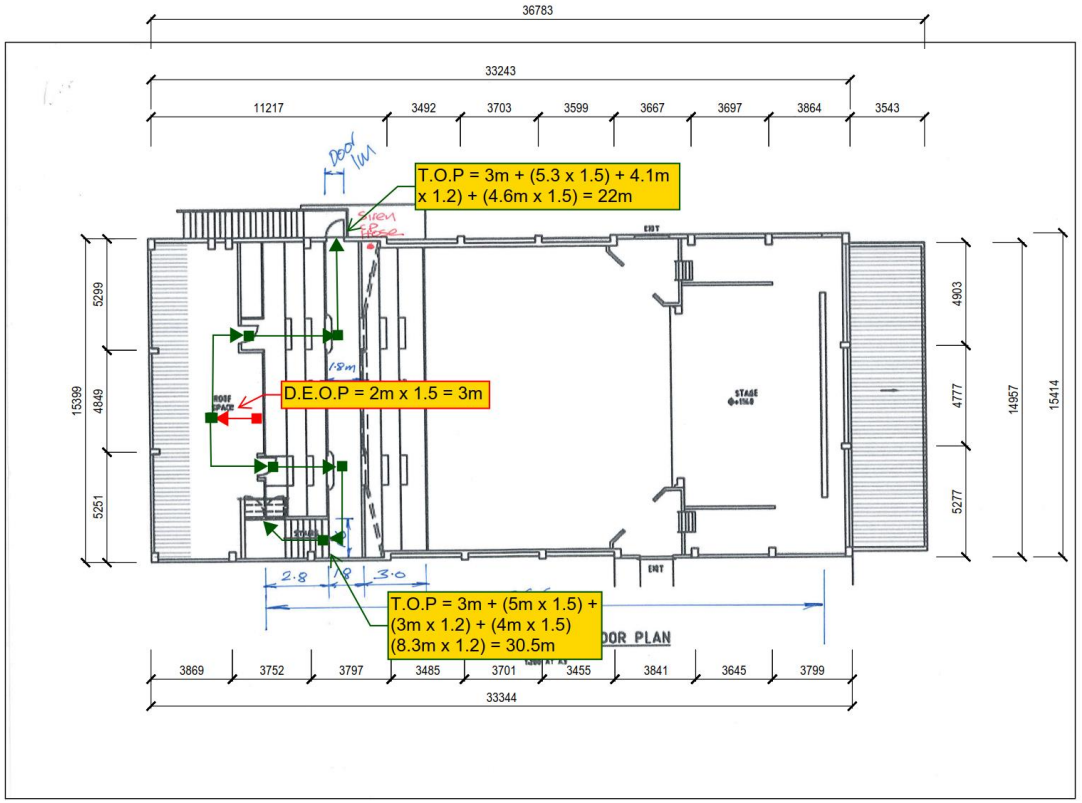
REVISION HISTORY		
REV	DATE	DESCRIPTION
1	-	INTERNAL ONLY

CLIENT:	KCDC
PROJECT No.:	123456
VERSION DATE:	26/02/2020
DRAWN:	
ENGINEER:	
APPROVED:	

SIZE: A3

SITE PLAN

SHEET No.: SS01 REV. 1



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