

Reference Number: 2023/991

4 August 2023

[REDACTED]

Email: [REDACTED]

Tēnā koe [REDACTED]

Response - Official Information Request

I refer to your request for information received on 6 July 2023. Your request has been considered under the Local Government Official Information and Meetings Act 1987 (LGOIMA) and I provide the following information.

"All correspondence and information held regarding the Foxton War Memorial Hall and its earthquake prone status"

On 6 July and 17 July 2023, a request for clarification and/or refinement was sent to you as your request in its current form was very complex and would require substantial research and collation.

Horowhenua District Council has not had any response to our request for clarification and/or refinement. To avoid a charge or a refusal under section 17(f) of the LGOIMA on the basis that the request requires substantial collation or research, Council has decided to interpret your request as information relating to the earthquake strengthening/seismic assessments and the earthquake strengthening issues of the building.

Accordingly, please find attached all relevant information on the earthquake strengthening/seismic assessments. In response to the material enclosed, it is necessary to withhold contact details and other personal information in accordance with section 7(2)(a) of the LGOIMA, to protect individual privacy.

You are entitled to seek an investigation and review by the Office of the Ombudsman. Information about how to make a complaint is available at www.ombudsman.parliament.nz or free phone 0800 802 602.

Horowhenua District Council publishes responses to Local Government Official Information and Meetings Act 1987 (LGOIMA) requests that we consider to be of wider public interest, or which relate to a subject that has been widely requested. To protect your privacy, we will not generally publish personal information about you, or information that identifies you. We will publish the LGOIMA response along with a summary of the request on our website. Requests and responses may be paraphrased.

If you have any queries regarding this information, please contact the LGOIMA Officer on LGOIMAOfficer@horowhenua.govt.nz

Ngā mihi



Monique Davidson
Chief Executive

Territorial Authority Checklist
Determination whether a building or part is earthquake prone or not
Sections 133AB and 133AK of the Building Act 2004

Building/site address: *Clyde Street Foxton – Foxton Memorial Hall*

Legal description: *Part Section 104 Town of Foxton, Part Section 105 Town of Foxton*
Certificate of Title: *Volume/Title – 17/264*

Priority Building:

Yes ☐

No ☒

Information received from building owner

Has the owner provided information?

Yes ☐

No ☒

(If 'No' proceed to part 2)

~~Summary of information provided:~~

~~Engineering assessment provided by owner:~~

~~Yes ☐~~

~~No ☐~~

~~Engineering assessment accepted (meets EPB Methodology)~~

~~Yes ☐~~

~~No ☐~~

~~Assessed %NBS rating from engineering assessment~~

~~—%NBS~~

~~Evidence of factual error provided:~~

~~Yes ☐~~

~~No ☐~~

~~Details of error:~~

~~Other information about building status e.g. strengthening work complete and the Council is satisfied the building or part is no longer earthquake prone, or demolition work complete.~~

~~Yes ☐~~

~~No ☐~~

~~Details of other information:~~

Previous Assessment information

Previous engineering assessment held on file by Council:

Yes ☒

No ☐

Previous IEP assessment meets EPB Methodology:

Yes ☒

No ☐

Previous assessed %NBS rating from IEP:

<33% NBS

Decision

Building or part is determined **not** earthquake-prone

Yes ☐ No ☒

Reason:

N/A

Building or part is determined **earthquake-prone**

Yes ☒ No ☐

Reason:

Council has accepted an engineering assessment which confirms the building or part is less than 34%NBS

% NBS rating assigned: <33% NBS

Priority building No

Category rating: 20% to less than 34% NBS

Timeframe for remediation 15 years

Signed:

Miller

Role: Compliance Manager

Date: 27 July 2022

Reviewed by:

Role: Group Manager Customer & Strategy

Date:

Notes

The owner is to complete seismic work by: _____ 2037

Corner of Clyde and Main Street, Foxton – Foxton Memorial Hall

12 July 2021

Horowhenua District Council
Private Bag 4002
Levin 5540

Dear Sir/Madam

Property: Corner of Clyde and Main Street, Foxton
Legal Description: Part Section 104 Town of Foxton
Part Section 105 Town of Foxton
Certificate of Title: Volume/Title – 17/264

This letter contains important information about your property so it is important you read all the information below carefully.

The Building Act 2004 ('the Act') requires Council to identify potentially earthquake-prone buildings (or parts of buildings) by applying the Earthquake-Prone Building Methodology (EPB Methodology) in the Horowhenua. The Act also allows for buildings to be identified as potentially earthquake prone at any time if the Council has reason to suspect the building may be earthquake prone.

You are receiving this letter as you are shown on our records as being the owner of the above building; please advise the Council if this is not the case.

This letter is to inform you that the result for your property is:

Property Address	Result
Corner of Clyde and Main Street, Foxton Foxton Memorial Hall	Potentially Earthquake-Prone Building This is because Council has an Initial Evaluation Procedure (IEP) on file reporting this property as being below 34% New Building Standard (NBS) at < 33% NBS .

What does this mean?

In accordance with section 133A1 of the Building Act 2004, as the building owner you have until **12 July 2022** to provide Council with either:

1. An engineering assessment of the building (or a previous assessment) undertaken by a suitably qualified structural engineer that complies with the requirements of the EPB Methodology. This will be used to determine if the building is earthquake prone or not.
2. Evidence of a factual error in the basis on which the Council have identified this building as potentially earthquake prone.
3. Notification that you do not intend on providing an engineering assessment of the building.

If you advise us that you do not intend on providing an engineering assessment or do not provide any required information to us by the due date, we will then proceed as if it had determined the building is earthquake prone and issue a notice in accordance with section 133AL(4) of the Building Act 2004.

What's next?

Once all the information has been reviewed, we will contact you to notify you of the decision on the building's earthquake-prone status. If the building is determined as earthquake prone, or if we proceed as if we had determined the building to be earthquake prone, we would then formally issue an earthquake-prone building notice under section 133AL of the Building Act 2004 to you as the owner and to any persons or organisations which have an interest in the building.

A copy of the earthquake-prone building notice needs to be fixed in a prominent position on the building. This will specify the date by which you will be obligated to undertake seismic work so that the building is no longer earthquake prone. The building will also be entered into the register of earthquake-prone buildings: <https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/epb-register/>

Information regarding the potentially earthquake-prone status of the building, including this letter, is available on request and will be included in land and project information memoranda (LIMs and PIMs).

If you are unable to meet the due date for providing the engineering assessment, you can apply for an extension of time for up to twelve months. You must apply for the extension no later than **12 May 2022**. When applying for the time extension please clearly explain your reasons for the request for Council to consider. If the time extension is approved by Council no further time extensions can be granted.

A copy of the EPB Methodology and other information about earthquake-prone buildings is available on the Ministry of Business, Innovation and Employment website: <https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/>

If you have any further questions regarding this letter or earthquake-prone buildings please contact Council on compliance@horowhenua.govt.nz or 06 366 0999.

Regards



Vai Miller
Compliance Manager

Sean Hester

From: Chloe Marheine
Sent: Wednesday, 9 December 2020 2:06 pm
To: [REDACTED]
Cc: David Clapperton
Subject: Email to [REDACTED] - Request for Earthquake Strengthening Reports - Foxton War Memorial Hall - Foxton Coronation Hall - 9 December 2020
Attachments: Foxton Coronation Hall - Concept Seismic Retrofit Scheme and Seismic Evaluation - Darren Harpur Opus International Consultants - June 2014 (2).pdf; D14 66004 Foxton War Memorial Hall - Concept Seismic Retrofit Scheme and Seismic Evaluation - Darren Harpur Opus International ~ June 2014.pdf

Good afternoon [REDACTED]

As per your request at the Foxton Community Board meeting on Monday 30th November.

Please find attached the seismic evaluation reports from June 2014 for the Foxton War Memorial Hall and Foxton Coronation Hall.

Kind regards,

Chloe

Chloe Marheine

Executive Assistant Infrastructure Development | Kaiāwhina Mātāmua: Rangapū Whakawhanake Pūnahahanga

Waea Mahi | (06) 366 0999

Waea Pukoro [REDACTED]

126 Oxford Street, Levin
Private Bag 4002, Levin 5540



Horowhenua
DISTRICT COUNCIL

**We are.
LGNZ.**

22nd May 2013

5-P0523.00

HDC – Foxton Memorial Hall - Initial Seismic Review.

1. Introduction

Horowhenua District Council commissioned Opus International Consultants Ltd (Opus) to undertake a seismic review of a number of HDC owned buildings and assets. This was to include the following Stages;

- 1) A review of all available archive information for the building.
- 2) An Opus Engineer to undertake an initial non-intrusive visual site investigation of the building
- 3) Undertake an initial evaluation procedure (IEP) if deemed appropriate.
- 4) Or a undertake a quantitative assessment at a level of complexity sufficient to identify with a reasonable degree of confidence the present seismic rating for the building expressed as a % of new building standard (%NBS).
- 5) Based upon the findings of the above review, if necessary undertake a more detailed site investigation of the building, including any localised breakouts and material testing required.
- 6) Produce detailed calculations to confirm each buildings seismic rating (%NBS).
- 7) The calculations produced are to report not only the overall %NBS for the building but are to identify the failure mechanisms within the building and their relevant %NBS to allow strengthening options to be identified.
- 8) Provide strengthening options including rough order of costs to achieve the following seismic ratings (if practical) for each building;

34%NBS
67%NBS
100%NBS
>100%NBS

This report covers the first 6 stages, with recommendations provided on the way forward to the next stage.





Fig 1. Foxton Memorial Hall

2. Archive information available and assumptions made as part of this assessment

Very little archive information relating to this building could be located and the following assessment has been done based solely upon the information obtained and from the visual inspection of the site/building.

A plaque on the building indicated that it was built in 1953.

The seismic assessment has been based upon the following:

- Very limited archive information was available for this structure.
- All dimensions and details used in the assessment were based upon the visual site inspection undertaken by an Opus Structural Engineer.
- Typical material strengths taken from NZSEE document 'Assessment and Improvement of the Structural Performance of Buildings in Earthquakes' used in the assessment;

Concrete:	30Mpa
Reinforcement:	300Mpa

- No archive structural information was available, with the presence of reinforcement in the concrete members identified by the use of a cover member, reinforcement size could not be confirmed.

No record of geotechnical descriptions of the underlying soil profiles could be located for this building and therefore the assessment has been based upon typical geotechnical conditions for the Foxton area.

3) Structural System

The identification of the structural system for this building was made through a visual site inspection undertaken by an Opus Structural Engineer on the 19th March 2013.

The building is a single storey reinforced concrete framed structure with unreinforced masonry (URM) infill panels providing lateral restraint. A lightweight metal clad roof supported off timber purlins and timbers trusses was constructed over the main hall and entrance foyer/offices. A cement board type ceiling was provided throughout the building, however this would not have sufficient strength to restrain the tops of the walls during a seismic event and no other bracing system could be identified within the ceiling and roof to achieve this.

The overall plan measurement of the building is approximately 34.5m long x 14.5m wide and 7.0m to the ridge line.

A suspended timber floor supported off small diameter piles at regular centres was provided throughout the building, with the exception of the small side structure which had a ground bearing concrete slab provided.

The external URM panels were confirmed (by drilling) to be 230mm thick masonry with no cavity, plastered internally and with cement render externally (255mm overall thickness).

A cover meter was used to confirm the presence of reinforcement within the concrete piers, with 8 Number bars identified in the main hall piers and 4 Number bars within the entrance/office area (Bar sizes could not be confirmed).

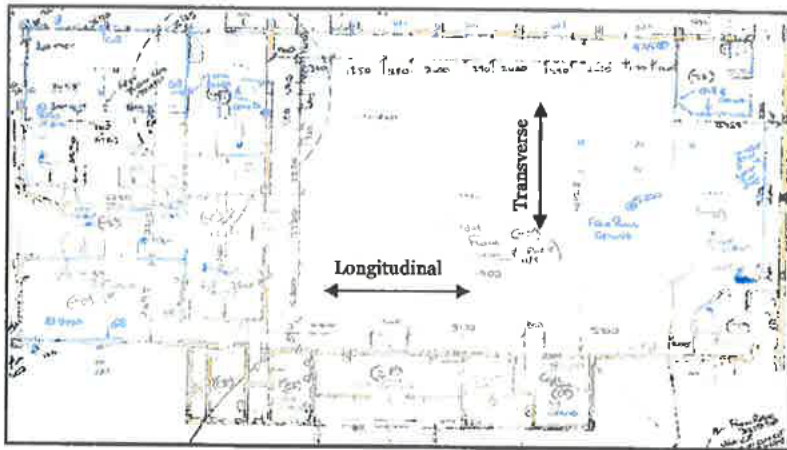


Fig 2. Floor plan.

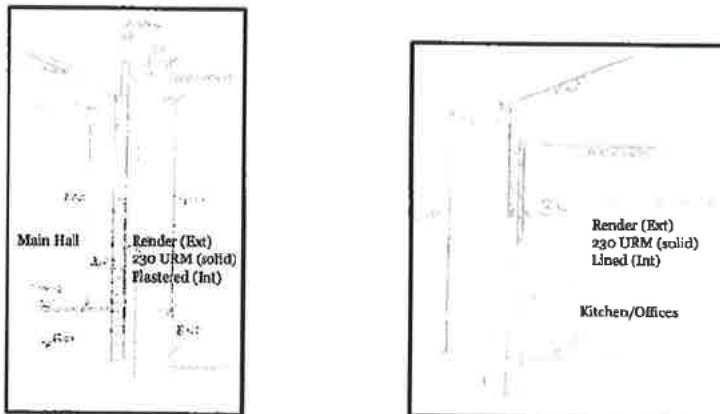


Fig 3. Sections through external walls.



The foundation type could not be confirmed during the visual inspection however it is likely that the URM walls and concrete piers were built off the ground bearing foundations with thickenings/pads provided at the pier locations.

3.1 Building Condition

Generally the visible parts of the structure would appear to be in good condition for the age of the building with no obvious signs of movement or distress identified. However due to a recent refurbishment and redecoration having been undertaken on the building any existing cracking/movement would likely have been filled and painted over, both internally (plastered finish) and externally (rendered finish).



Fig 4. External View.



Fig 5. Roof over Hall.



Fig 6. Main Hall – toward stage.



Fig 7. Main Hall toward kitchen/offices.



Fig 8. External walls under stage area.



Fig 9. Rear wall of stage area.

4 Assessment

An Initial Evaluation Procedure (IEP) was not thought appropriate for this building due to its age and type of construction and with the obvious lack of an adequate bracing system within the roof/ceiling it would most certainly report a %NBS<33%.

Consequently a quantitative assessment of the building elements have been undertaken to examine in more detail the potential overall seismic rating which could be achieved for this building, assuming an adequate bracing system had been provided within the ceiling/roof of sufficient strength to transmit the lateral forces to the relevant shear walls.

4.1 Assessment Findings

A summary of the structural performance of the building is shown in Table 1: Summary of Seismic Performance. Note that the values given represent the worst performing elements in the building as these effectively define the building's capacity.

The reported values in Table 1. are based upon the assumption that an adequate bracing system had been provided within the ceiling/roof, which from our visual inspection is not the case.

Table 1: Summary of Seismic Performance.

Structural Element/System	Failure Mode, or description of limiting criteria.	%NBS based on calculated Capacity
Roof/ceiling Bracing system.	None provided.	<33%
Longitudinal Shear Walls	In-plane action: <i>shear</i> <i>flexure</i>	39% 39%
Transverse Shear Walls	In-plane action: <i>shear</i>	23%
Shear Walls	Out-of-plane action: <i>flexure</i> <i>* generally with the exception of the Main Hall wall with high level windows.</i>	38%* <33%

5) Conclusions and Recommendations

The calculated seismic rating for this building is <33 percentage of New Building Standard (%NBS) due to a lack of any adequate bracing system provided within the roof or ceiling. A quantitative assessment of the building elements was undertaken to examine in more detail the potential overall seismic rating which could be achieved for the other elements of the building, assuming the bracing system provided in the ceiling/roof was of sufficient strength to transmit the lateral forces to the relevant shear walls (i.e. strengthening had been provided). This concluded that the building would still achieve a %NBS < 33% due to in-plane shear failure of the URM walls in the transverse direction and out-of-plane failure on a number of URM panels in Main Hall (i.e. the panels with high level windows).

The quantitative assessment undertaken has highlighted that the following (but not limited to) issues, would need to be resolved to bring the building's seismic rating to >67%NBS:

The provision of a bracing system in the ceiling/roof.

Investigate the practicality of providing either steel bracing or plywood diaphragms to the roof/ceiling of the Main Hall and the foyer/office area.

Increasing the in-plane capacity of the URM shear walls.

Investigate the practicality of either infilling a number of windows/doors, the provision of steel bracing, or the use of surface bonded fibre reinforced polymer systems etc. or a combination of systems to provide sufficient lateral restraint to the building in both the longitudinal and transverse directions.

Increasing the out-of-plane capacity of the URM panels.

Investigate the practicality of providing sufficient lateral restraint to the URM panels to resist out-of-plane failure, or consider the use of surface bonded fibre reinforced polymer systems etc. (or a combination of systems).

Prepared By.

Darren Harpur
Senior Structural Engineer



Reviewed By

Dave Dekker
Principal Structural Engineer, CPEng



Appendix A: Structural Analysis – Methodology

A.1. Analysis Parameters

Table A1: Assumed Earthquake Action Parameters

Parameter	Value	Comments
Site Subsoil Class	D	Deep or soft soil
Z	0.36	Seismic hazard factor for Foxton/Foxton Beach
R	1.0	Importance level 2, Normal structure
N(T,D)	1.0	Greater than 20 km from nearest major fault
T ₁	0.48	1 st period of structural vibration

Table A2: Assumed Structural Displacement Ductility Factors

Component	Criteria
URM walls – in Plane forces	$\mu = 1.00$
URM walls – Out of Plane Bending	$\mu = 1.25$

A.2. Material Properties

The following material properties were used in the analyses:

Table A3: Assumed Material Properties

Material	Nominal Strength
Concrete	$f_c = 30\text{MPa}$
Reinforcement	$f_y = 300\text{MPa}$

The following criteria from the earthquake loadings standard NZS 1170.5 were used to determine the site loading spectrum:

A.3. Design methodology and assumptions

Seismic forces were applied using the Equivalent Static Method as outlined in NZS 1170.5.

The structural qualitative analysis was carried out using the two predominant directions of the building.

Based on the actions determined from the analysis, an assessment of the building capacities was made and the percentage of new building standard (%NBS) was calculated.

9 August 2013

Foxton Tourist & Development Association
PO Box 27
FOXTON
4848

To whom it may concern,

Earthquake-prone building – Foxton Memorial Hall

Further to the phone discussion on Thursday 8 August 2013 between Paul Andrews and Sue Madsen, Councils Customer Services Officer regarding your occupation of the Foxton Memorial Hall, this letter serves to formally notify you that the hall has recently been identified as being earthquake prone, as defined in the Building Act 2004. This is a serious issue and this letter sets out further details for you to consider your risk in relation to your proposed occupation of the building.

Council has recently completed a detailed engineering report on the Foxton Memorial Hall to determine the buildings seismic capacity. This report has identified the Foxton Memorial Hall has a seismic rate of less than 33% of the New Building Standard (NBS). This means that the hall is earthquake prone and has a high risk of exceeding its structural capacity in a moderate earthquake.

The Building Act 2004 defines an earthquake prone building as:

Earthquake-prone Building;

- (a) *will have its ultimate capacity exceeded in a moderate earthquake; and*
- (b) *would be likely to collapse causing—*
 - (i) *injury or death to persons in the building or to persons on any other property; or*
 - (ii) *damage to any other property.*

The Horowhenua District Council has obligations under the Health and Safety Employment Act 2002 in various capacities, including as an employer, principal, or “person in control of a workplace”. In particular, a “person in control of a place of work” extends to building owners, tenants, occupiers and persons in possession of the workplace.

Duty holders under the HSE Act must ensure that they have an effective method for identifying the risk of serious harm, and take all ‘practical steps’ to protect employees, customers and other third parties from that harm. While “all practical steps” is a high standard, it does not mean “complete protection”. Rather it sets as expectation that where hazards are identified all practical steps are taken to remove or minimise the risk posed.

The Council has adopted the concept of ‘tolerable risk’ in relation to seismic risk, reflecting the reality that in everyday life people face a variety of risks and make judgements on whether those risks are broadly acceptable, tolerable or unacceptable. Council recognises that it needs to take a diligent, yet pragmatic approach to its own earthquake prone buildings.

The Council at its full Council meeting on Wednesday 8 August, have resolved that they consider that the continued occupation of the Foxton Memorial Hall is a tolerable risk on the basis that:

- The Engineering evaluation has determined that the type of material and construction method of the grandstand indicates that the buildings failure in a moderate earthquake is unlikely to be catastrophic. That is the total failure of the entire structure is unlikely to occur in a moderate earthquake.
- Occupiers have a choice of entry. Signage will be installed on the buildings entry points indicating the earthquake risk. This provides occupiers with the choice of determining whether entry to the building is an acceptable, tolerable or unacceptable risk to them.
- Tenants/Hirers have a choice of occupation. Council is writing to all tenants and regular hirers and they have a choice whether the risk of continuing to use the building is acceptable, tolerable unacceptable to their operation and customers/visitors.

While occupation of an earthquake-prone building is not illegal under the Building Act 2004, we appreciate that for some people this will be a difficult issue to understand, and a difficult decision for you to make in relation to your proposed event.

If you wish to discuss this in more detail, please contact Ann Clark, Councils Property Officer or myself at Council.

Yours faithfully

Doug Tate
Property Manager
Horowhenua District Council

9 August 2013

Foxton Tourist & Development Association
PO Box 27
FOXTON
4848

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Earthquake-prone building – Foxton Memorial Hall

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Yours faithfully

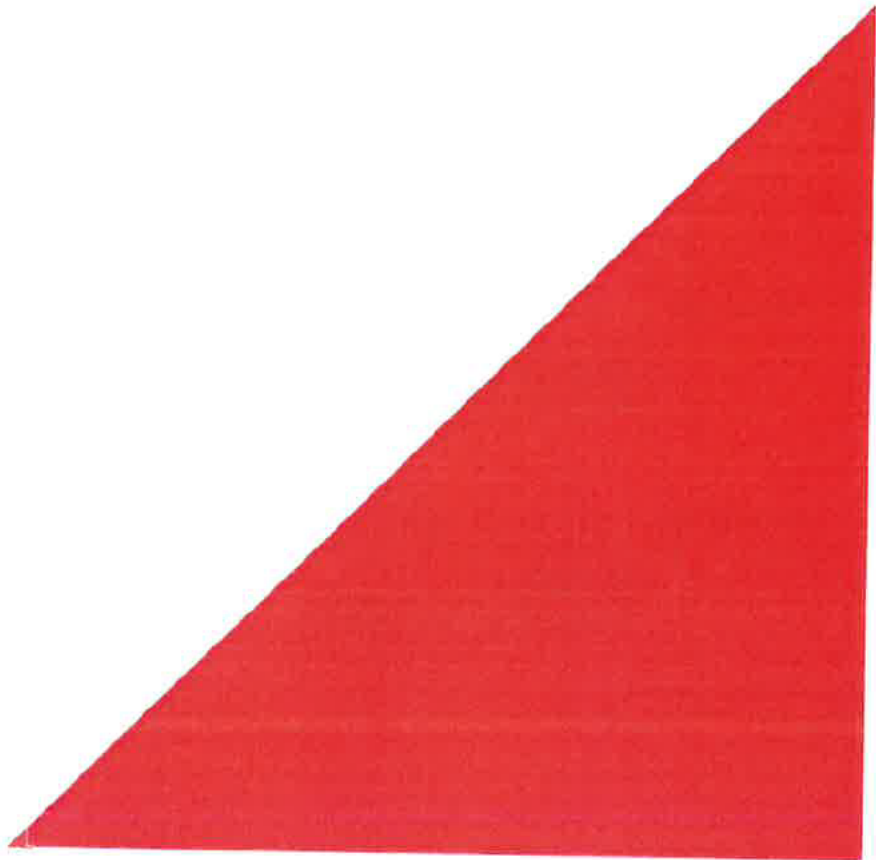


Doug Tate
Property Manager
Horowhenua District Council



*Seismic Review of Horowhenua District Council
owned Buildings and Assets*

Foxton Memorial Hall Concept Seismic Retrofit Scheme





Seismic Review of Horowhenua District Council owned Buildings and Assets

Foxton Memorial Hall

Concept Seismic Retrofit Scheme

Prepared By:

Darren Harpur
Senior Structural Engineer

Reviewed By:

Dave Dekker
Principal Structural Engineer

Opus International Consultants Ltd
Palmerston North Office
L4, The Square Centre, 478 Main Street
PO Box 1472, PN Central, Palmerston North
4440
New Zealand

Telephone: +64 6 350 2500
Facsimile: +64 6 350 2525

Date: 10-04-14
Reference: 5-P0523.01
Status: FINAL



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1 Introduction

Horowhenua District Council (HDC) commissioned Opus International Consultants Ltd (Opus) to provide concept seismic retrofit schemes including rough order of costs (ROC) as part of the seismic review of HDC owned buildings and assets.

This report should be read in conjunction with the "Foxton Memorial Hall – Initial Seismic Review" dated 22nd May 2013 by Opus. The detailed seismic assessment undertaken as part of this seismic review confirmed that the building achieved a rating of less than 33%NBS (Percentage of New Building Standard) and was classified as "Earthquake Prone" in accordance with the Building Act. The assessment identified significant deficiencies in the roof bracing, in-plane shear and out-of-plane bending failure on the longitudinal and transverse walls of the main hall and kitchen/office area.



Fig 1. Foxton Memorial Hall

2 Archive Information and Assumptions

No archive information relating to this building could be located and the following retrofit design was based solely upon the information obtained from the visual inspection of the site/building.

A plaque on the building indicated that it was built in 1953.

The concept seismic retrofit design was based upon the following:

- Dimensions and details from a the visual site inspection undertaken by an Opus Structural Engineer.

- Typical material strengths taken from NZSEE document 'Assessment and Improvement of the Structural Performance of Buildings in Earthquakes' used in the assessment;
Concrete: 30Mpa
Reinforcement: 300Mpa
- No archive structural information was available, with the presence of reinforcement in the concrete members identified by the use of a cover member. The reinforcement sizes could not be confirmed but were based upon typical size and arrangement (conservative rebar sizes used) used at the time of construction.

No record of geotechnical descriptions of the underlying soil profiles could be located for this building and therefore the design was based upon typical geotechnical conditions for the Foxton area.

3 Structural System

The identification of the structural system for this building was made through a visual site inspection undertaken by an Opus Structural Engineer on the 19th March 2013.

The building was a single storey reinforced concrete framed structure with unreinforced masonry (URM) infill panels providing lateral restraint. A lightweight metal clad roof supported off timber purlins and timber trusses was constructed over the main hall and entrance foyer/offices. A cement board type ceiling was provided throughout the building, however this would not have sufficient strength to restrain the tops of the walls during a seismic event and no other bracing system could be identified within the ceiling and roof to achieve this.

The overall plan measurement of the building is approximately 34.5m long x 14.5m wide and 7.0m to the ridge line.

A suspended timber floor supported off small diameter piles at regular centres was provided throughout the building, with the exception of the small side structure which had a ground bearing concrete slab provided.

The external URM panels were confirmed (by drilling) to be 230mm thick masonry with no cavity, plastered internally and with cement render externally (255mm overall thickness).

A cover meter was used to confirm the presence of reinforcement within the concrete piers, with 8 Number bars identified in the main hall piers and 4 Number bars within the entrance/office area (Bar sizes could not be confirmed).

The foundation type could not be confirmed during the visual inspection however it is likely that the URM walls and concrete piers were built off the ground bearing foundations with thickenings/pads provided at the pier locations.

4 Concept Seismic Retrofit Design

A series of 2 & 3D computer models of the building were created and analysed under loads applied in accordance with the recommendations of NZSEE 'Assessment and Improvement of the Structural Performance of Buildings in Earthquake' and NZS1170 with the proposed strengthening measures added and analysed as part of the concept seismic retrofit design.

Strengthening measures were designed for the failure mechanisms that were identified in the detailed seismic assessment with a strengthening targets of >34%NBS, >67%NBS, 100%NBS, or as high as practicable.

A summary of the proposed seismic retrofit measures are listed in Table 1. below:

Location	Proposed seismic retrofit	Achievable %NBS
Main Hall	Install new structural steel plan bracing above the existing ceiling level (<i>see sketches SK/01, 02 & 05 for details</i>). (<i>some breakout of the existing ceiling will be required</i>).	100%
Kitchen/offices	Removal of existing ceiling and the construction of a plywood ceiling diaphragm throughout (<i>see sketch SK/03 for details</i>).	100%
Main Hall Internal & external walls	Install a number of structural steel members and plates to restrain the unreinforced masonry infill panels from out-of-plane failure (<i>see sketches SK/04, 06-08 for details</i>).	48%
Kitchen/offices External walls	Install a number of structural steel members and plates to restrain the unreinforced masonry infill panels from out-of-plane failure (<i>see sketches SK/04, 07-08 for details</i>).	55%
Foyer/toilets	Install vertical structural steel braced frames (<i>see sketches SK/04 & 09 for details</i>).	100%
Main Hall/kitchen/offices Longitudinal walls	Infill a number of small windows with concrete to improve in-plane capacity of the walls (<i>see sketch SK/06 for details</i>).	44%
Main Hall/kitchen/offices Transverse walls	No strengthening proposed.	55%

Table 1.

The seismic rating achievable for this building following the installation of the proposed seismic retrofit was >44%NBS. This was limited by in-plane and out-of-plane failure in the unreinforced masonry infill panels provided throughout the building.

To increase the achievable %NBS to >67% would require substantial modifications to the building including but not limited to;

- Installation of FRP strengthening, the partial demolition and use of reinforced shotcrete, or the complete removal and replacement with reinforced concrete to a significant number of the unreinforced masonry panels including the construction of associated foundations and modifications to the timber floor throughout the building.

- The provision of a significant number of additional structural steel restraints (structural members and plates etc.) to any remaining unreinforced masonry panels.

While a %NBS > 67% is achievable it would involve the partial demolition/alteration of a significant part of this building with the subsequent cost implications. At this stage the final design and costing for this option has not been considered.

5 Rough Order of Costs

Professional Fees for Detailed Design and Construction Monitoring	\$25,000.00
Building Works	\$173,000.00
Construction Contingency	\$12,000.00
TOTAL (excluding GST)	\$210,000.00

Basis of Estimate

- Opus concept design documentation.

Assumptions

- The estimate includes for Seismic Strengthening Related Works only.
- The Target Seismic Strengthening Upgrade is 40%NBS.
- Competitive Pricing (i.e. Building Contract is Tendered rather than Negotiated).
- No requirement for additional fire protection works following the completion a fire report undertaken as part of any Consent process (As agreed, the Client is to provide a Fire Report if required).

Exclusions

- Building Consent fees and levies.
- Resource Consent related costs, if any.
- Diversion of existing services.
- Unidentified ground conditions.
- Alteration and/or Redecoration Works to the remainder of the Building.
- Any allowance for phased construction/or if work is to be undertaken during out-of-hours only.
- Escalation beyond the date of the estimate.
- Possible market pricing changes due to recovery from Christchurch earthquakes, either through inflationary pressure or changes to Engineering philosophies generally.
- GST.

RLB | Rider Levett Bucknall

**FOXTON MEMORIAL HALL
SEISMIC STRENGTHENING
HOROWHENUA DISTRICT COUNCIL**

Seismic Review

Rough Order of Cost Estimate

April 2014

Prepared for: Opus International Consultants Ltd
P O Box 1472
Palmerston North 4440

Prepared by: Rider Levett Bucknall Palmerston North Ltd
P O Box 1117
Palmerston North 4440
New Zealand
Tel: +64 6 357 0326
Fax: +64 6 356 5624
www.rlb.com

Our reference: PN 1127A

RLB | Rider Levett Bucknall

FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC - ROUGH ORDER OF COST ESTIMATE

Project Summary

Project Number	PN1127A
Project Description	FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC FOXTON
Version Number	1
Version Description	ROUGH ORDER OF COST ESTIMATE
Building Classification	15 Unclassifiable
Rates current	April 2014
Estimate subdivisions	No subdivisions
Net Cost	\$185,000
Margin & Adjustments	
Total Cost	\$185,000
Gross floor area	505 m2
Net Cost/m2	\$366
Margin & Adjustments/m2	\$0
Total Cost/m2	\$366

FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC - ROUGH ORDER OF COST ESTIMATE

Project Summary

BASIS OF ESTIMATE

The estimate is based on measured approximate quantities/built-up elemental rates applied to measured areas with rates current as at April 2014

The estimate is based on the Proposed Seismic Strengthening Scheme Report prepared by Opus International Consultants Ltd, Palmerston North

The estimate includes for the Seismic Strengthening Related Works only

ITEMS SPECIFICALLY EXCLUDED

- . Goods and Services Tax
- . Consultants Charges
- . Statutory and Building Consent Charges
- . Alteration and/or Redecoration Works to Remainder of the Grandstand
- . Fluctuations in Cost

FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC - ROUGH ORDER OF COST ESTIMATE

Project Elemental

Gross floor area: 505 m2
Rates current at April 2014

Element	Cost	Cost/m2
SP SITE PREPARATION	16,165	32
FR FRAME	24,892	49
RF ROOF	30,883	61
EW EXTERNAL WALLS	7,880	16
PN INTERNAL PARTITIONS	4,000	8
WF WALL FINISHES	5,520	11
CF CEILING FINISHES	47,100	93
HV HEATING AND VENTILATION SERVICES	3,000	6
SU SUNDRIES	10,000	20
PG PRELIMINARIES	15,560	31
MG MARGINS	8,000	16
CN CONTINGENCIES	12,000	24
Total \$	185,000	366

FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC - ROUGH ORDER OF COST ESTIMATE

Item Details

Rates current at April 2014

Item	Description	Unit	Qty	Rate	\$
A	GFA 505 m2 Cost/m2 \$366				
	SP SITE PREPARATION				
	1 Remove existing windows	m2	3.00	125.0	375
	2 Remove existing single door and frame set	No	1.00	40.0	40
	3 Remove existing wall lining including skirting and cornice	m2	17.00	20.0	340
	4 Remove existing ceiling lining to Hall	m2	215.00	10.0	2,150
	5 Remove existing ceiling lining to Entry Foyer and Amenities	m2	152.00	10.0	1,520
	6 Cut back top section of partition for installing plywood diaphragm	m	32.00	50.0	1,600
	7 Remove and reinstate existing lighting where new ceiling lining installed	Item			5,000
	8 Cut chase in external wall plaster for installation of steel restraint	m	59.00	40.0	2,360
	9 Cut chase in internal wall plaster for installation of steel restraint	m	57.00	40.0	2,280
	10 Remove section of partition to install wall bracing in Toilet and make good	Item			500
	Element SP total			32/m2	16,165
	FR FRAME				
	1 Structural steel wall bracing	kg	442.00	8.0	3,536
	2 M12 Chemset anchor fixing steel bracing	No	56.00	15.0	840
	3 Structural steel horizontal wall restraints	kg	1832.00	8.0	14,656
	4 M16 Chemset anchors fixing SHS restraint base plate to R C column	No	144.00	15.0	2,160
	5 Fix structural steel restraints through masonry wall with M16 bolt	No	148.00	25.0	3,700
	Element FR total			49/m2	24,892
	RF ROOF				
	1 90 x 6 EA plate fixed to existing RC bond beam	kg	1155.00	8.0	9,240
	2 M16 Chemset anchor fixing 90 x 6 EA to RC bond beam	No	253.00	15.0	3,795
	3 Structural Steel roof bracing	kg	1454.00	12.0	17,448
	4 Fibre cement board eaves soffit lining with paint finish to Foyer Entry	m2	4.00	100.0	400
	Element RF total			61/m2	30,883
	EW EXTERNAL WALLS				
	1 200 thick reinforced concrete infill to existing window & door openings	m2	5.00	750.0	3,750
	2 Make good with plaster and paint finish up to horizontal steel restraint	m	118.00	35.0	4,130
	Element EW total			16/m2	7,880
	PN INTERNAL PARTITIONS				
	1 Make good existing partition where cut back to install plywood diaphragm	m	32.00	125.0	4,000
	Element PN total			8/m2	4,000
	Page total				83,820

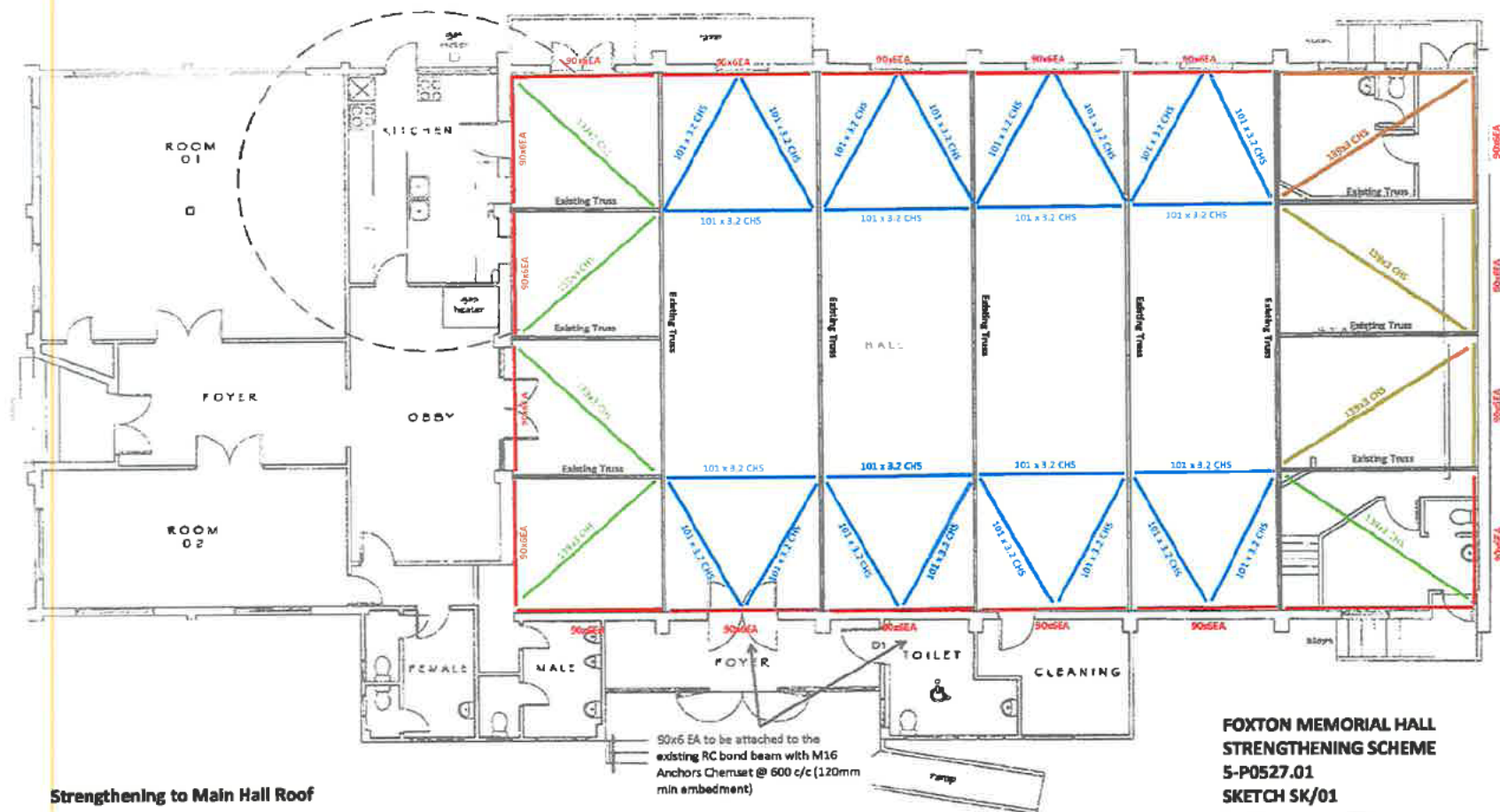
FOXTON MEMORIAL HALL SEISMIC STRENGTHENING, HDC - ROUGH ORDER OF COST ESTIMATE

Item Details

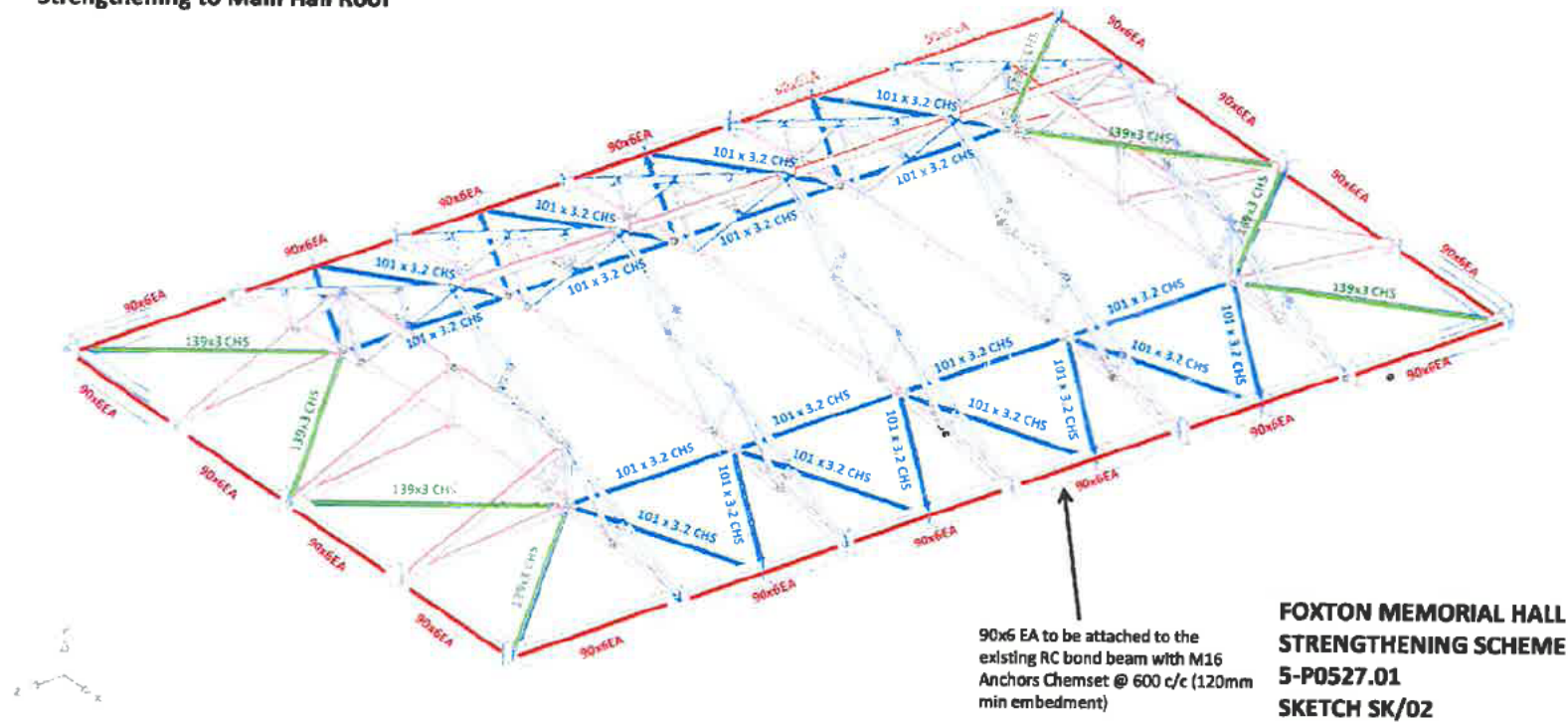
Rates current at April 2014

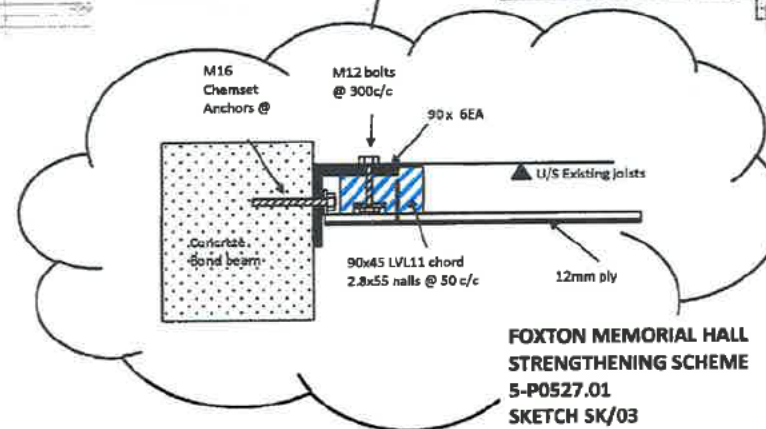
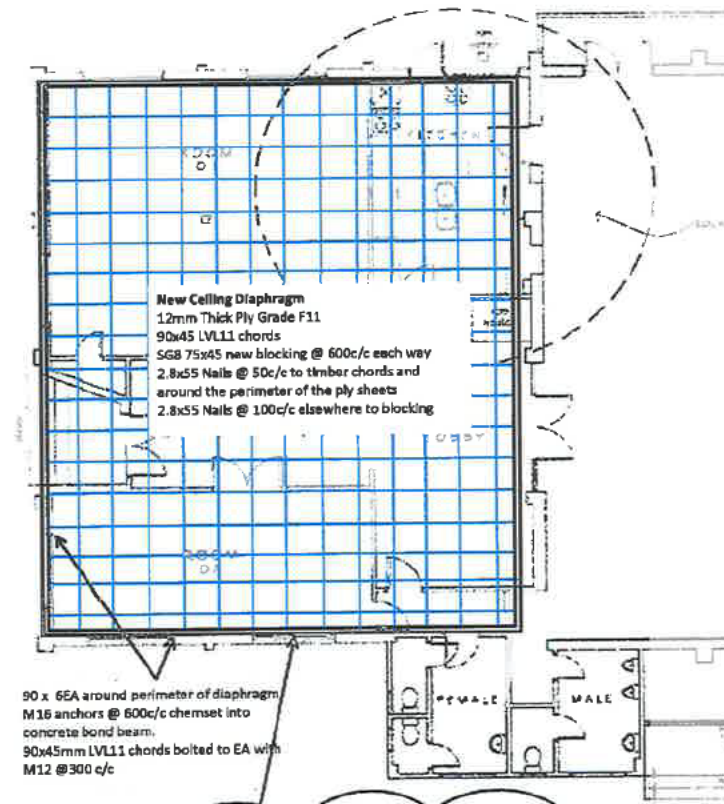
Item Description	Unit	Qty	Rate	\$
A GFA 505 m2 Cost/m2 \$366 Cont'd				
WF WALL FINISHES				
1 GIB Aqualine lining on timber strapping with L4 and paint to Toilets	m2	21.00	100.0	2,100
2 Make good with plaster and paint finish up to steel horizontal restraint	m	114.00	30.0	3,420
Element WF total			11/m2	5,520
CF CEILING FINISHES				
1 Reinstate ceiling lining in Hall after installing roof bracing	m2	215.00	100.0	21,500
2 Timber framing to support plywood diaphragm	m2	152.00	50.0	7,600
3 12 thick F11 grade plywood diaphragm with paint finish	m2	152.00	60.0	9,120
4 13 thick Standard GIB lining with paint finish fixed over plywood diaphragm	m2	148.00	60.0	8,880
Element CF total			93/m2	47,100
HV HEATING AND VENTILATION SERVICES				
1 Extract ventilation system to Toilet	No	2.00	1,500.0	3,000
Element HV total			6/m2	3,000
SU SUNDRIES				
1 Provisional Sum for miscellaneous demolition and making good works	Item			10,000
Element SU total			20/m2	10,000
PG PRELIMINARIES				
1 Allowance for Contractor's preliminary and general items	Item			5,560
2 Allowance for external and internal scaffolding	Item			10,000
Element PG total			31/m2	15,560
MG MARGINS				
1 Allowance for Contractor's overheads and profit	Item			8,000
Element MG total			16/m2	8,000
CN CONTINGENCIES				
1 Allowance for Design and Contract Contingencies	Item			12,000
Element CN total			24/m2	12,000
A Total				185,000

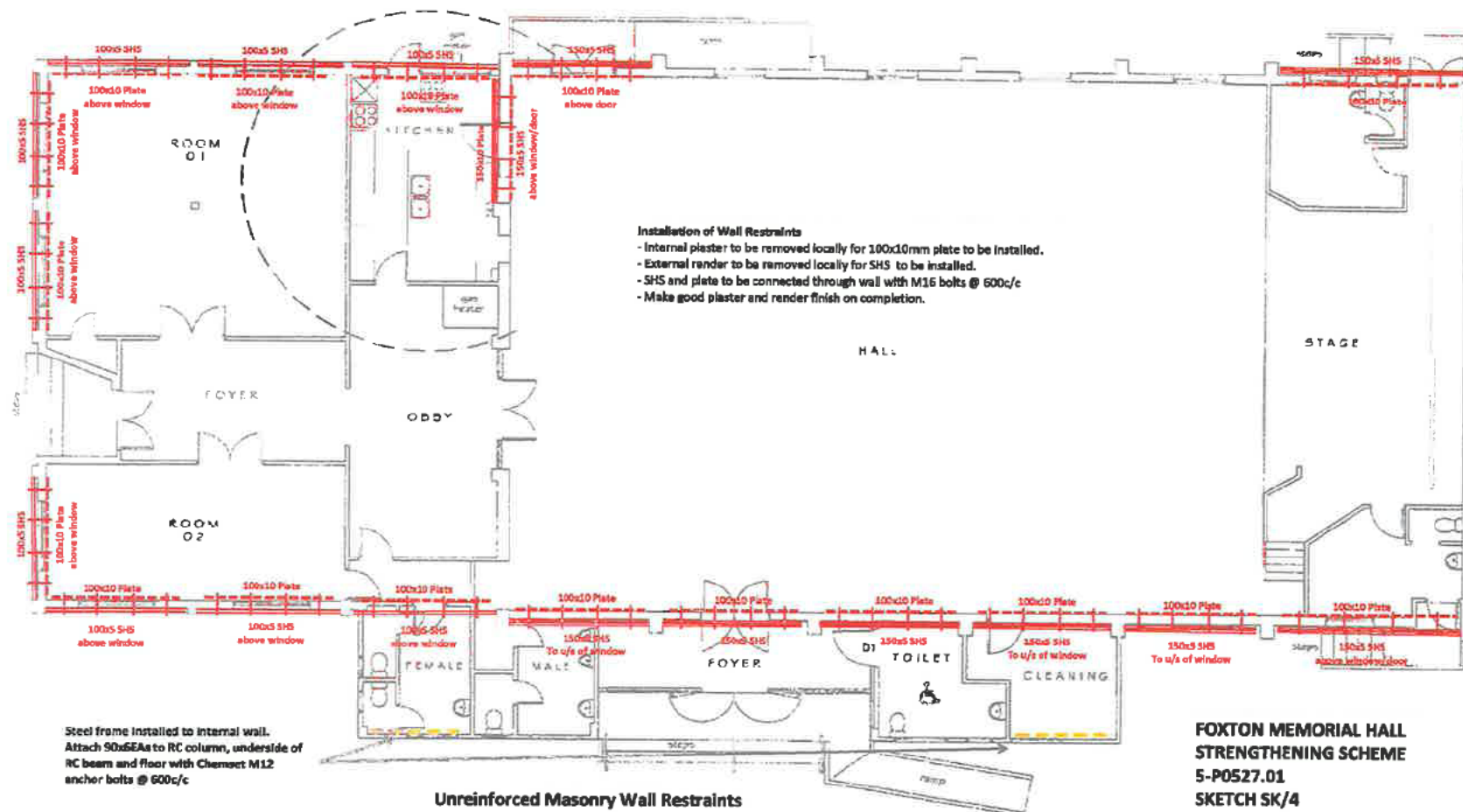
6 Concept Retrofit Scheme Sketches



Strengthening to Main Hall Roof

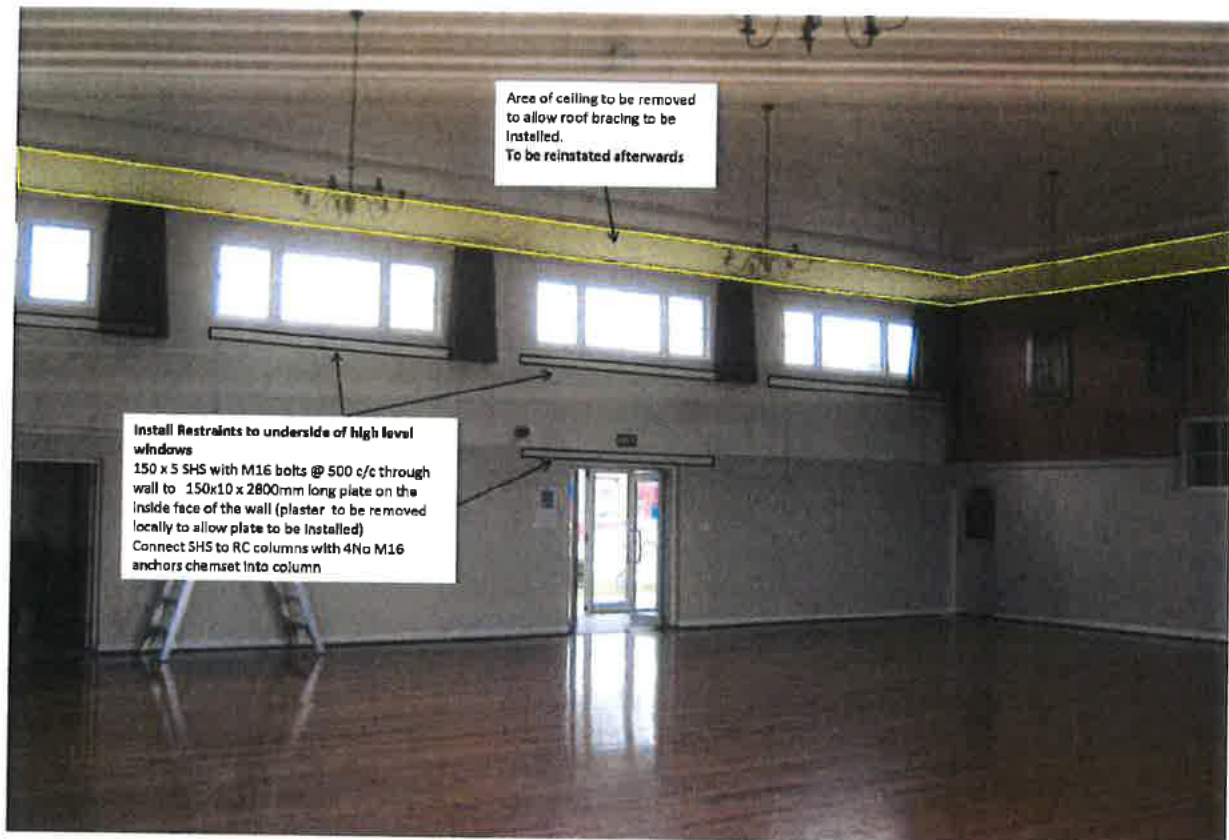


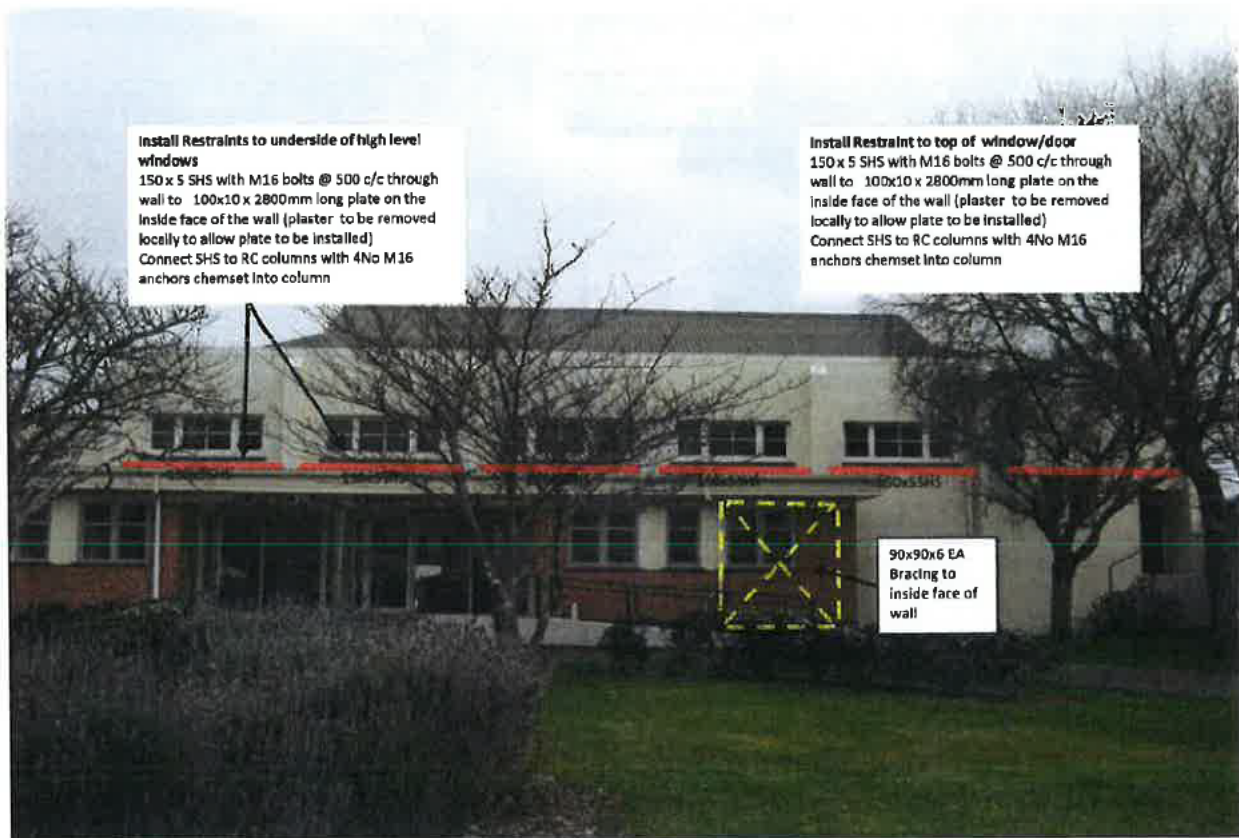






**FOXTON MEMORIAL HALL
STRENGTHENING SCHEME
S-P0527.01
SKETCH SK/05**





Install Restraint to top of door
 150 x 5 SHS with M16 bolts @ 500 c/c through wall to 100x10 x 2800mm long plate on the inside face of the wall (plaster to be removed locally to allow plate to be installed)
 Connect SHS to RC columns with 4No M16 anchors chemset into column

Install Restraint to top of window/door
 100 x 5 SHS with M16 bolts @ 500 c/c through wall to 100x10 x 2800mm long plate on the inside face of the wall (plaster to be removed locally to allow plate to be installed)
 Connect SHS to RC columns with 2No M16 anchors chemset into column

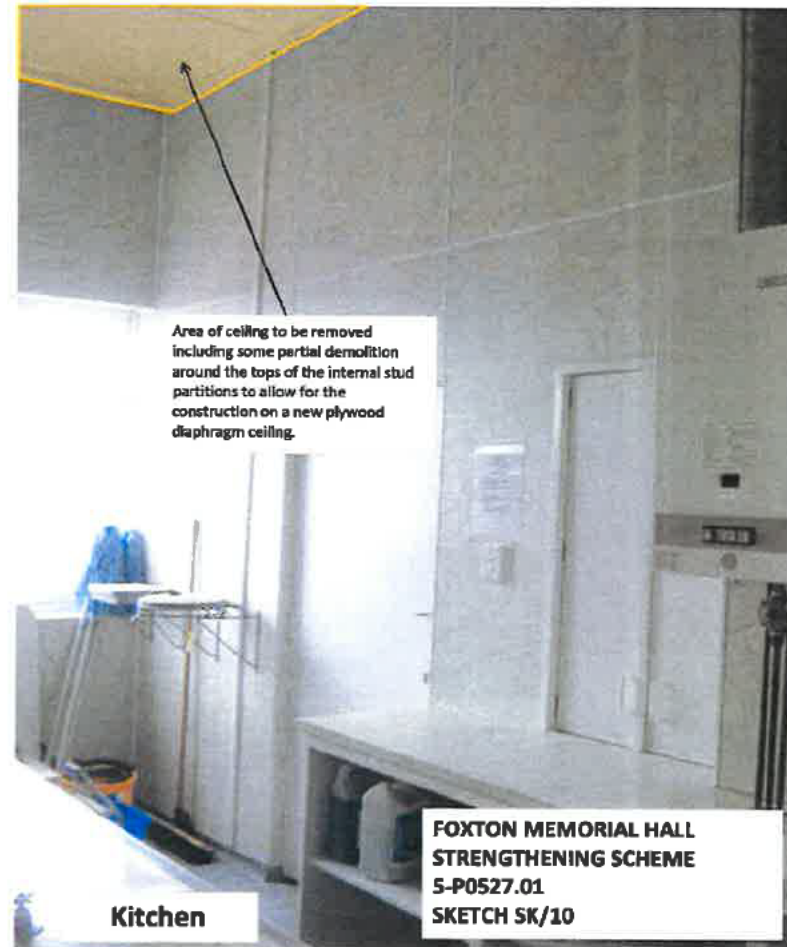
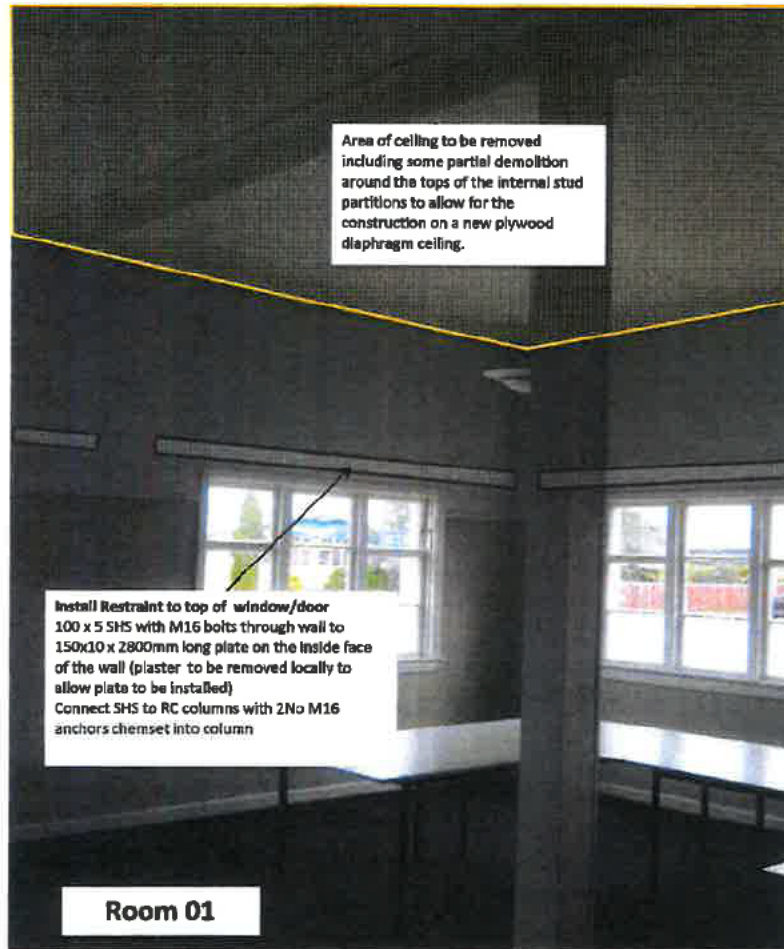


Install Restraint to top of window/door
 100 x 5 SHS with M16 bolts through wall to 100x10 x 2800mm long plate on the inside face of the wall (plaster to be removed locally to allow plate to be installed)
 Connect SHS to RC columns with 2No M16 anchors chemset into column



**FOXTON MEMORIAL HALL
 STRENGTHENING SCHEME
 5-P0527.01
 SKETCH SK/08**







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PO Box 1472, PN Central, Palmerston North
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New Zealand

Tel: +64 6 350 2500
Fax: +64 6 350 2525
Web: www.opus.co.nz

1 November 2017

Horowhenua District Council
Private Bag 4002
Levin 5540

Dear Horowhenua District Council

Earthquake-prone Buildings: A guide to the earthquake-prone building provisions of the Building Act

Council has previously written to you regarding a building you own in relation to Earthquake-prone Buildings. This letter serves as an update of the changes in legislation, next steps for Council in adhering to the understood changes and ensuring we have the most up to date contact details.

1. Introduction

The system for identifying and managing earthquake-prone buildings changed on 1 July 2017, when the Building (Earthquake-prone Buildings) Amendment Act 2016 came into force. The new system ensures the way our buildings are managed for future earthquakes is consistent across the country, and provides more information for people using buildings. There are new requirements, powers and time frames to address earthquake-prone buildings.

2. New system for managing earthquake-prone buildings

The Building (Earthquake-prone Buildings) Amendment Act 2016 came into force on 1 July 2017. It changes the current system for identifying and remediating earthquake-prone buildings.

Owners of earthquake-prone buildings will be required to take action within certain time frames depending on the seismic risk area their building is located in. Affected owners will be contacted by Council in coming months.

Horowhenua has been categorised as a high seismic risk area. This means that Council must identify potentially earthquake-prone buildings within 5 years, and building owners must strengthen or demolish earthquake-prone buildings within 15 years.

3. What happens next?

The new system prioritises identification and remediation of earthquake-prone buildings that either pose a high risk to life safety, or are critical to recovery in an emergency. These buildings are called 'priority buildings'. Priority buildings must be identified and remediated in half the time allowed for other earthquake-prone buildings, to reduce the risks to life safety more promptly.

This means that Council must identify potentially earthquake-prone *priority* buildings in this district within 2.5 years, and building owners must strengthen or demolish earthquake-prone *priority* buildings within 7.5 years.

Council's next steps will be identifying *priority* buildings and thoroughfares, contacting building owners and carrying out public consultation on *priority* buildings and routes in the District

Once the priority buildings and thoroughfares have been finalised after consultation, Council will assess the identified buildings to determine whether they are potentially earthquake prone in accordance with the EPB methodology, any affected building owners will be well notified and notices issued if applicable. Thereafter, Council will then set out to identify other earthquake-prone buildings and formally notify building owners.

Council has previously engaged a consultant to undertake Initial Seismic Assessments of buildings within the Horowhenua District. These assessments will be peer reviewed to ensure they meet the requirements of the changes in legislation. Once the peer review is complete Council will move forward with next steps in formal identification.

These processes along with timeframes will be well communicated to the building owners and the wider community after the *priority* building identification process has been completed.

4. What can you expect from Horowhenua District Council?

You can expect regular communication, updates and invites from Council regarding Earthquake-prone Buildings, including the status of your building/s and provide guidance around relevant next steps.

There are also other projects going on in Council that are relevant and have an alignment to earthquake-prone buildings, it is expected that those project owners will be in contact once all of your details have been updated.

5. What we need from you

To ensure that we can provide you with great customer service you will find a contact card and self-addressed envelope enclosed. We ask that you complete the form, pop it in the self-addressed envelope and put it in the post box so we can update your contact details accordingly.

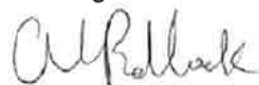
6. More information

Please find enclosed a leaflet with information on The Building (Earthquake-prone) Amendment Act 2016 for your information.

Further information on the new system for managing earthquake-prone buildings can also be found at: <https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/> or on Council's website www.horowhenua.govt.nz

If you seek further clarification or have any specific questions please do not hesitate to contact me directly at cathrynp@horowhenua.govt.nz.

Kind regards



Cathryn Pollock
Project Coordination Lead

9 August 2013

Dear [REDACTED]

Earthquake-prone building – Foxton Memorial Hall

Further to your phone discussion on Thursday 8 August 2013 with Sue Madsen, Councils Customer Services Officer regarding your occupation of the Foxton Memorial Hall, this letter serves to formally notify you that the hall has recently been identified as being earthquake prone, as defined in the Building Act 2004. This is a serious issue and this letter sets out further details for you to consider your risk in relation to your proposed occupation of the building.

Council has recently completed a detailed engineering report on the Foxton Memorial Hall to determine the buildings seismic capacity. This report has identified the Foxton Memorial Hall has a seismic rate of less than 33% of the New Building Standard (NBS). This means that the hall is earthquake prone and has a high risk of exceeding its structural capacity in a moderate earthquake.

The Building Act 2004 defines an earthquake prone building as:

Earthquake-prone Building;

- (a) *will have its ultimate capacity exceeded in a moderate earthquake; and*
- (b) *would be likely to collapse causing—*
 - (i) *injury or death to persons in the building or to persons on any other property; or*
 - (ii) *damage to any other property.*

The Horowhenua District Council has obligations under the Health and Safety Employment Act 2002 in various capacities, including as an employer, principal, or “person in control of a workplace”. In particular, a “person in control of a place of work” extends to building owners, tenants, occupiers and persons in possession of the workplace.

Duty holders under the HSE Act must ensure that they have an effective method for identifying the risk of serious harm, and take all ‘practical steps’ to protect employees, customers and other third parties from that harm. While “all practical steps” is a high standard, it does not mean “complete protection”. Rather it sets as expectation that where hazards are identified all practical steps are taken to remove or minimise the risk posed.

The Council has adopted the concept of ‘tolerable risk’ in relation to seismic risk, reflecting the reality that in everyday life people face a variety of risks and make judgements on whether those risks are broadly acceptable, tolerable or unacceptable. Council recognises that it needs to take a diligent, yet pragmatic approach to its own earthquake prone buildings.

The Council at its full Council meeting on Wednesday 8 August, have resolved that they consider that the continued occupation of the Foxton Memorial Hall is a tolerable risk on the basis that:

- The Engineering evaluation has determined that the type of material and construction method of the grandstand indicates that the buildings failure in a moderate earthquake is unlikely to be catastrophic. That is the total failure of the entire structure is unlikely to occur in a moderate earthquake.
- Occupiers have a choice of entry. Signage will be installed on the buildings entry points indicating the earthquake risk. This provides occupiers with the choice of determining whether entry to the building is an acceptable, tolerable or unacceptable risk to them.
- Tenants/Hirers have a choice of occupation. Council is writing to all tenants and regular hirers and they have a choice whether the risk of continuing to use the building is acceptable, tolerable unacceptable to their operation and customers/visitors.

While occupation of an earthquake-prone building is not illegal under the Building Act 2004, we appreciate that for some people this will be a difficult issue to understand, and a difficult decision for you to make in relation to your proposed event.

If you wish to discuss this in more detail, please contact Ann Clark, Councils Property Officer or myself at Council.

Yours faithfully

Doug Tate
Property Manager
Horowhenua District Council

9 August 2013

Coley Street School
[REDACTED]
51 Coley Street
FOXTON
4814

Dear Mr [REDACTED]

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Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council

9 August 2013



Dear 

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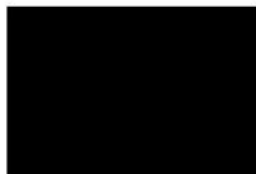
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Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council

9 August 2013



Dear 

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- The Engineering evaluation has determined that the type of material and construction method of the grandstand indicates that the buildings failure in a moderate earthquake is unlikely to be catastrophic. That is the total failure of the entire structure is unlikely to occur in a moderate earthquake.
- Occupiers have a choice of entry. Signage will be installed on the buildings entry points indicating the earthquake risk. This provides occupiers with the choice of determining whether entry to the building is an acceptable, tolerable or unacceptable risk to them.
- Tenants/Hirers have a choice of occupation. Council is writing to all tenants and regular hirers and they have a choice whether the risk of continuing to use the building is acceptable, tolerable unacceptable to their operation and customers/visitors.

While occupation of an earthquake-prone building is not illegal under the Building Act 2004, we appreciate that for some people this will be a difficult issue to understand, and a difficult decision for you to make in relation to your proposed event.

If you wish to discuss this in more detail, please contact Ann Clark, Councils Property Officer or myself at Council.

Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council

9 August 2013



Dear 

Earthquake-prone building – Foxton Memorial Hall

Further to your phone discussion on Thursday 8 August 2013 with Sue Madsen, Councils Customer Services Officer regarding your occupation of the Foxton Memorial Hall, this letter serves to formally notify you that the hall has recently been identified as being earthquake prone, as defined in the Building Act 2004. This is a serious issue and this letter sets out further details for you to consider your risk in relation to your proposed occupation of the building.

Council has recently completed a detailed engineering report on the Foxton Memorial Hall to determine the buildings seismic capacity. This report has identified the Foxton Memorial Hall has a seismic rate of less than 33% of the New Building Standard (NBS). This means that the hall is earthquake prone and has a high risk of exceeding its structural capacity in a moderate earthquake.

The Building Act 2004 defines an earthquake prone building as:

Earthquake-prone Building;

- (a) will have its ultimate capacity exceeded in a moderate earthquake; and
- (b) would be likely to collapse causing—
 - (i) injury or death to persons in the building or to persons on any other property; or
 - (ii) damage to any other property.

The Horowhenua District Council has obligations under the Health and Safety Employment Act 2002 in various capacities, including as an employer, principal, or "person in control of a workplace". In particular, a "person in control of a place of work" extends to building owners, tenants, occupiers and persons in possession of the workplace.

Duty holders under the HSE Act must ensure that they have an effective method for identifying the risk of serious harm, and take all 'practical steps' to protect employees, customers and other third parties from that harm. While "all practical steps" is a high standard, it does not mean "complete protection". Rather it sets an expectation that where hazards are identified all practical steps are taken to remove or minimise the risk posed.

The Council has adopted the concept of 'tolerable risk' in relation to seismic risk, reflecting the reality that in everyday life people face a variety of risks and make judgements on whether those risks are broadly acceptable, tolerable or unacceptable. Council recognises that it needs to take a diligent, yet pragmatic approach to its own earthquake prone buildings.

The Council at its full Council meeting on Wednesday 8 August, have resolved that they consider that the continued occupation of the Foxton Memorial Hall is a tolerable risk on the basis that:

- The Engineering evaluation has determined that the type of material and construction method of the grandstand indicates that the buildings failure in a moderate earthquake is unlikely to be catastrophic. That is the total failure of the entire structure is unlikely to occur in a moderate earthquake.
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Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council

9 August 2013

Foxton Kung Fu School



Dear [REDACTED]

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If you wish to discuss this in more detail, please contact either **Ann Clark, Councils Property Officer** or myself at Council.

Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council

8 August 2013

Department of Corrections
[REDACTED]

Business and Finance Adviser
298 Church Street
PALMERSTON NORTH
4410

Dear [REDACTED]

Earthquake-prone building – Foxton Memorial Hall

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While occupation of an earthquake-prone building is not illegal under the Building Act 2004, we appreciate that for some people this will be a difficult issue to understand, and a difficult decision for you to make in relation to your continued occupancy. With this in mind we encourage you to make contact with us to discuss your occupation of an earthquake prone building.

If you require further information on this matter, either Ann Clark, Councils Property Officer or myself at Council.

Yours faithfully



Doug Tate
Property Manager
Horowhenua District Council