

# Christchurch City Council ATTACHMENTS - UNDER SEPARATE COVER

Wednesday 24 January 2024

**Council Chambers, Civic Offices,** 

9.30 am

Date: Time:

Venue:

	53 Hereford Street, Christchurch					
TABLE OF CONTENTS NGĀ IHIRANGI						
10.	Yalo	dhurst Memorial Hall - Future Use Issues and Options				
	A.	FCEL Engineering Report and Repair Concepts	3			
	В.	OPUS / THC Structural Reports	33			
	C.	Cost Estimate - WTP	67			
	D.	YRRA EOI Information	85			
	E.	Statement of Significance	110			
	F.	Factors to Consider When Dealing Unilaterally	116			



ADDRESS: 524 Pound Road, Yaldhurst

Christchurch 7676

CLIENT: Christchurch City Council (CCC)

TITLE: Detailed Seismic Assessment (DSA)



**DOCUMENT REFERENCE:** 2217-CCC-DSA01

**DATE:** 18<sup>th</sup> October 2022

ISSUE: Final









# Review

Originator:

Lachlan Howat

Senior Structural Engineer

Reviewer:

Simon Finn

**Chartered Professional Engineer** 

CPEng, CMEngNZ

# **Revision Record**

Revision	Date	Details	Originator	Reviewer	
1	18.10.22	Final	LH	SF	

#### LIMITATIONS

This report is for the use by the client only and should not be used or relied upon by any other person or entity or for any other project without express permission from the client and/or Finesse Consulting Engineers.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Finesse Consulting Engineers Limited. No responsibility is accepted by Finesse Consulting Engineers Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.



# Contents

1.0	Executive Summary	4
2.0	Introduction	5
2.1	Scope of work	5
2.2	Documentation Available	5
3.0	Previous Assessments and Reports	5
3.1	Opus DSA Report	5
3.2	TH Consultants Report	6
3.3	Design Engineers Review Report	6
4.0	Building Description and Structural Systems	7
4.1	Lateral Load Resisting Systems	8
4.2	Secondary Systems	10
5.0	Structural Damage Observed	14
6.0	Seismic Analysis	17
6.1	Design Standards Used	17
6.2	Seismic Load Parameters and Coefficients	17
6.3	Seismic Analysis Approach	18
6.4	Building Ductilities	18
6.5	Site Geology	18
6.6	Assumptions	18
7.0	Assessed Earthquake Ratings	19
7.1	Side Walls	19
7.2	End Walls	20
7.3	Miscellaneous	21
8.0	Conclusion	21
8.1	Discussion	21
8.2	Recomendations	21
8.3	Occupancy	22
9.0	Limitations	22



#### 1.0 EXECUTIVE SUMMARY

FCEL has been engaged by the Christchurch City Council (CCC) to undertake a Detailed Seismic Assessment (DSA) of the structure at 524 Pound Road, Yaldhurst, Christchurch (known as the Yaldhurst Memorial Hall). The assessment is intended to determine the building's approximate percentage of New Building Standard (%NBS) by comparing its probable strength to the earthquake forces that the building would be subjected to under current New Zealand design codes (NZS1170.5: 2004).

Previous assessments undertaken in 2012 (by Opus) and 2020 (by TH Consultants) scored the building as 6%NBS (IL2) and 55%NBS (IL2) respectively.

A new DSA has been carried out by FCEL with reference to the most up to date procedures provided in the MBIE Earthquake Assessment Guidance documents. Based on this assessment, the structure is assessed at 15%NBS (IL2) and is therefore considered as an Earthquake Prone Building (EPB) with the weakest elements being the large unreinforced masonry (URM) panels on gridline 11, the reinforced concrete chimney structure and the roof bracing. Other elements below 34%NBS include several other URM panels throughout the structure and the cantilevered reinforced concrete columns which support the structure in the transverse direction.

Based on the CCC occupancy policy as described to FCEL, the building is deemed not fit to occupy as the structure is rated at less than 33%NBS and has brittle failure mechanisms.

FCEL understand that the client intends to improve the strength of the building with strengthening works to achieve 67%NBS (IL2). This is considered achievable for this structure. To improve the seismic rating of the structure the following components must be considered.

- Removal or significant strengthening of the chimney structure.
- Removal or strengthening of the infill masonry panels.
- Introduce horizontal roof trusses or diaphragms to improve end wall and roof load transfers.
- Confirm reinforcing in the masonry wall located by the entry lobby. Ensure diaphragm connects this masonry to the main structure.
- Strengthen the reinforced concrete columns (likely by introducing new portal frames).

E

#### 2.0 INTRODUCTION

FCEL has been engaged by the Christchurch City Council (CCC) to undertake a detailed seismic assessment (DSA) of the Yaldhurst Memorial Hall. The assessment is intended to determine the buildings' approximate percentage of New Building Standard (%NBS) by comparing its probable strength to the earthquake forces that the building would be subjected to under current New Zealand design codes as per NZS1170.5: 2004.

A detailed analysis of the structure has been carried out and capacities of the various lateral load resisting components have been compared to applied loadings equal to 100% of the current building code requirements.

#### 2.1 SCOPE OF WORK

- A detailed review existing drawings and reports.
- Site visit to observe existing layout and damage.
- Undertake a quantitative structural analysis to determine the probable seismic lateral load resistance rating as per the MBIE EPB Guidance and NZSEE Assessment Guidance both released in 2017.
- Provide concept methods of strengthening solutions in order to achieve 34%NBS and 67%NBS as required.

This assessment will not address the seismic rating of any non-structural elements.

#### 2.2 DOCUMENTATION AVAILABLE

- Original Architectural Drawings by L.G. Childs (20.03.1953)
- Original Structural Drawings by E.G.S Powell Consulting Engineer (06.07.1953)
- CCC Proposed Repair Concept CP501859-060 (05.03.2018)
- Opus Detailed Seismic Assessment Report 6-QUCCC.44 (September 2012)
- TH Consultants Detailed Seismic Assessment Report 2098-61(10 March 2020)
- Design Engineers Review of Detailed Seismic Assessments (26 June 2020)
- Heritage Assessment Statement of Significance (21 April 2020)

#### 3.0 PREVIOUS ASSESSMENTS AND REPORTS

The following seciton includes a commentary surrounding the previous structural assessment reports that have been provided to FCEL as part of this DSA process.

#### 3.1 OPUS DSA REPORT

The Opus DSA Report is a Quantitative Assessment completed in September 2012 prior to the establishment of the most recent EPB and MBIE Guidance documents that were released in 2017. This report rated the structure at 6%NBS, this was based on the lack of connection of the infill panels to the surrounding concrete frame structure and the (assumed) lack of ties between the brickwork skins. The capacity of the next weakest element (being the concrete columns in the out of plane direction) was in the order of 24%NBS.

This report noted damage that was not observable during the FCEL inspection, such as external damage to the chimney that has since been covered for weathertightness purposes prior to FCEL's inspection.



The Opus report does not include any calculations justifying their findings, although several assumptions and factors they used in establishing their design are provided in the report.

The Opus Report does not give a %NBS for the chimney structure, although significant damage was observed in this location.

#### 3.2 TH CONSULTANTS REPORT

The TH Consultants Report is a brief letter titled Assessment Summary Report completed by Chartered Professional Engineer, Noel Hanham, in 2020 and includes brief calculations supporting the conclusions drawn for the %NBS rating. This report concludes that the structure is rated at 55%NBS with the governing element being the out of plane reinforced concrete columns, although the calculations also consider the "worst case" scenario for the infill walls which assumes that the veneer ties had completely degraded, and this reduced the rating to 38%NBS. It appears that engineering judgement has been used to justify disregarding this rating, along with localised visual investigations into the integrity of the veneer ties (the integrity of some of the veneer ties was also confirmed by FCEL).

FCEL consider that the TH Consultants report, although brief, uses generally sound engineering logic and judgement, however FCEL disagree with the use of high levels of ductility (2.0) in the assessment especially for items such as the foundations.

#### 3.3 DESIGN ENGINEERS REVIEW REPORT

The Design Engineers (DE) review report was conducted to compare the Opus Report and the TH Consultants Report to determine which report could be relied upon. The DE report concluded that the Opus Report gave a better representation of the structure and the expected performance, although little to no justification was provided as to why the Opus report was favoured.

The DE report describes the various factors and assumptions made in both previous DSA reports but provides no commentary on which of these have been correctly or incorrectly applied.

FCEL recommend that the DE report be disregarded as it appears to only add an individual professional opinion as opposed assessing the completeness of previous reporting by method of calculation, which FCEL have completed.

#### 4.0 BUILDING DESCRIPTION AND STRUCTURAL SYSTEMS

The building was originally opened in 1954. It consists mainly of a single storey structure with a combination of timber framed, reinforced concrete and URM construction.

The original property was constructed to serve as a memorial hall with a reception area, main hall, meeting rooms, kitchen and bathrooms located on the main ground floor. At the northern end of the structure there is a first floor "Projection Room" located above the reception lobby, this is formed from timber framing.

The structure was extended in 1959 with the addition of an entrance structure to the northern elevation, along with a storeroom extension to the southern elevation. Previous reporting indicates that the end wall of these extensions were constructed using reinforced concrete masonry. No details are available for these extension structures and the specific detailing of these areas is unknown.

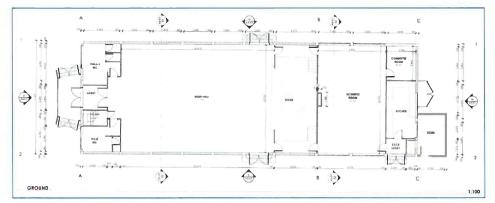


Figure 1 - Floor plan of existing structure

The roof is constructed using specifically designed timber and steel rod roof trusses at regular centres and a lightweight metal roof. The roof trusses support a Pinex ceiling which is supported directly by timber ceiling rafters. Each roof truss is supported by a reinforced concrete column which is supported by an incorporated reinforced concrete footing.

The exterior walls of the property are constructed from a combination of reinforced concrete frames with infill URM units with timber framed single glazing.

Internal walls are constructed using timber framing with "Pinex softboard" linings.

The foundations supporting the perimeter walls are formed from a continuous reinforced concrete strip footing with reinforced concrete pad foundations at each column.

The internal floor structure is a typical timber framed floor with timber bearers supported by short concrete piles arranged in a grid at regular centres. Previous reporting has observed that the flooring has suffered from borer damage, while FCEL did observe some level of borer, it was not deemed extensive where observed. Note, this is not considered a matter that affects the seismic rating of the structure, such concerns are outside of the scope of this report.

A cast in situ reinforced concrete chimney is found to the centre of the structure. This appears on the drawings to be connected to surrounding timber floor and roof framing and is shown to have a reinforced concrete base/hearth.



#### 4.1 LATERAL LOAD RESISTING SYSTEMS

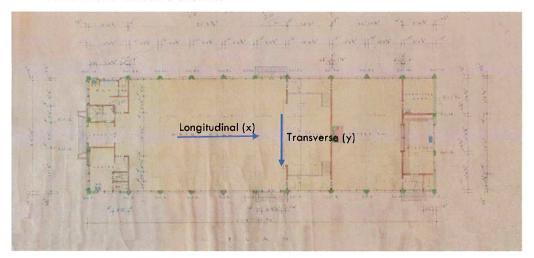


Figure 2 – Original floor plan with longitudinal and transverse directions noted.

#### Longitudinal (x) Direction:

In the longitudinal direction the lateral load resisting system is provided by the reinforced concrete frame with the infill URM panels. Where high level windows are present, the longitudinal load is required to transfer in bending through the short columns between the top of the URM and the roof as shown in Figure 3 and Figure 4.

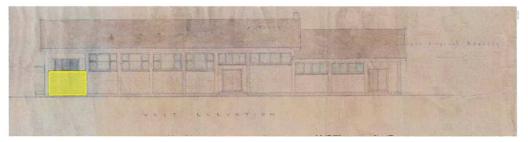


Figure 3 - Original west elevation (typical URM panel highlighted in yellow)



Figure 4 - Current west elevation (short column example circled)

The length of the walls in the longitudinal direction means overturning and load transfer to the foundations is not considered a critical element to the seismic rating of the structure.

Roof loads are distributed to the side walls using ceiling linings and roof bracing as indicated on the record drawings as "wind bracing" and was also observed on site to be formed using timber diagonals.

The concrete and URM end walls are braced in the longitudinal direction using a combination of cantilevered footings (similar to that of the side walls in the transverse direction) for out of plane loads and load spanning horizontally into the side walls via the reinforced concrete bond beams at the head of the wall panels.

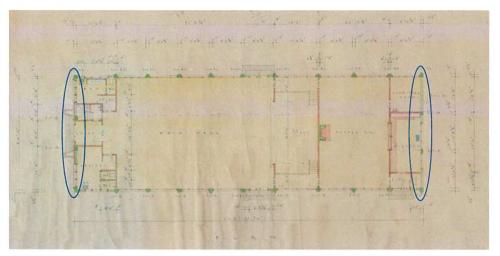


Figure 5 - Floor plan with end walls circled

#### Transverse (y) Direction:

The structure is braced in the transverse direction using the reinforced concrete columns which are cantilevered about the concrete bases and supported by integrated reinforced concrete pad foundations which bear directly on the assumed dense gravels that are expected to be encountered at shallow depths below the surface of this site. As each of the columns directly supports each roof truss, loads are directly transferred into each of the cantilevered columns. Loads are collected by these trusses using a combination of minor axis bending of the roof purlins, roofing, timber bracing and the ceiling linings.

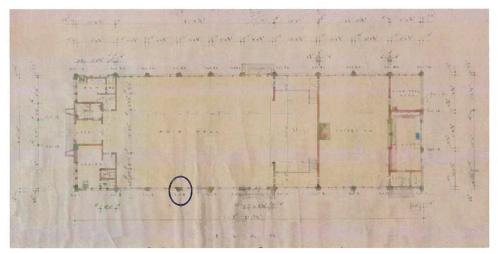


Figure 6 - Floor plan with cantilevered column circled

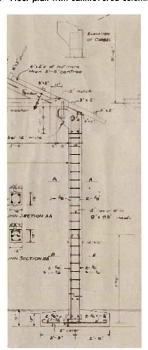


Figure 7 - Original detail of cantilevered column

#### 4.2 SECONDARY SYSTEMS

#### Infill Panels:

The perimeter walls are constructed using a reinforced concrete frame, the lower half of the walls are generally formed from a double skin URM blockwork while the upper halves are generally windows, as shown in Figure 8. The double skin URM panels are tied together using standard wire veneer ties at regular centres and are bounded by concrete columns to the sides and a reinforced concrete windowsill above. This fits the criteria for a "URM system within a bounding frame". The URM panels are generally prevented from moving out from the bounding frames

using a corbel detail as shown in Figure 10 and below. These details mechanically secure the masonry to the bounding frame and allow "arching" of the URM to begin as noted in section C7.6 of the MBIE Guidance. The reinforced concrete windowsill beams are not considered to provide any contribution to the panel or this arching action.

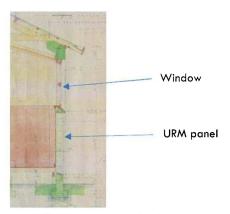


Figure 8 - Section of wall showing URM panels and windows

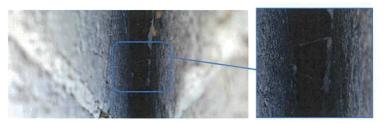


Figure 9 - Veneer ties observed intact during FCEL inspection

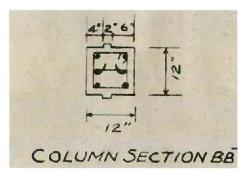


Figure 10 - Corbel detail on cantilevered columns





Figure 11 - Corbel detail (circled) observed as constructed on site

#### **End Walls**

The external end walls of the original structure are formed using similar construction to the side walls. However, the URM panels on the end walls are present to the full height of these walls, with bounding frames to all sides. The base is supported by cantilever footings and mid-height and apex bond beams are formed using reinforced concrete. These reinforced concrete bond beams form a two-way system that is supported on three sides by the long side walls and the cantilevered foundations. The roof line of this end wall is considered unsupported due to the difference in stiffness between the timber framed roof structure and the reinforced concrete end walls. Figure 13 shows an extract from the modelling software used in this assessment, showing the arrangement of these end walls beams and columns along with the fixities assumed.

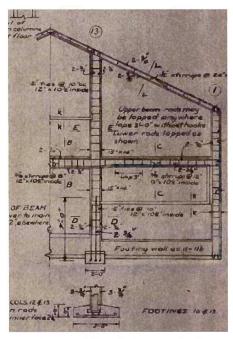


Figure 12 - Original details of the end wall



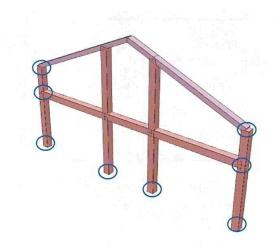


Figure 13 - Structural assessment model of the end wall, with restraint points circled

#### Chimney

The chimney is formed using in situ reinforced concrete, the concrete forms the four sides of the chimney flue, with an opening to one side at the base of the flue which forms the fireplace. The chimney is supported on a reinforced concrete base. Given the central location of the chimney within the structure, it appears to be well supported form all sides by the surrounding structures, details on the drawing showed that cleats were intended to attach the chimney to the timber structure, however, these cleats were not observed on site, given the lack of ties and the difference in stiffness between the chimney and the framing it appears that the chimney is cantilevering about the base in both directions, although some load will be transferred via compression into the roof framing and bracing. This mechanism for support is considered an unreliable load path.

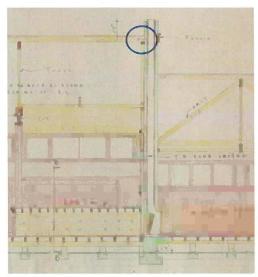


Figure 14 - Original detail of the chimney structure, proposed tie back circled



Figure 15 - As constructed chimney structure, tie back not observed.

## 5.0 STRUCTURAL DAMAGE OBSERVED

Structural damage has been visually observed on the site during FCEL's site inspection conducted by Lachlan Howat on  $25^{th}$  August 2022.

The damage observed on the site consisted of the following.

Cracking and movement at the interface of the perpendicular reinforced concrete framed walls. The cracking patterns are consistent with seismic loading and as can be seen in the annotated photo in Figure 17, the load path of the mid height beam of the end wall applies large levels of loading at a location that does not align with the rigid infill panels nor the reinforced concrete bounding frame of the side walls.





Figure 16 - Damage to walls in Male WC



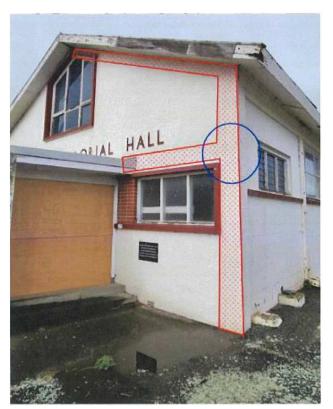


Figure 17 - End wall with bounding frame overmarked

Minor flexural cracking to the reinforced concrete columns at the base was observed, this is consistent with the damage that would be expected due to earthquake loading.



Figure 18 - Flexural cracking to concrete cantilevered posts

Minor step cracking was noted to several of the URM panels.

Isolated damage to the foundation at the rear of the structure, appears to have been caused due to the foundation being undermined by a lack of guttering, rather than as a result of seismic damage.



Figure 19 - Damage to foundation beam due to undermining of foundations unrelated to seismic damage

Minor damage noted to several non-structural elements such as the timber framed partitions, suspended ceilings and other ancillary linings. A significant portion of which was due to vandalism and lack of maintenance and therefore unrelated to the seismic events.

Cracking was observed to the concrete slab at the entry foyer. This is considered likely to be shrinkage cracking given the location of the cracking and appears unrelated to seismic movements.



Figure 20 - Cracking to entry lobby slab

Chimney damage could not be observed during the FCEL inspection, however, it was observed by Opus in 2012 and appears to show significant damage to the chimney. As this was not observed internally by FCEL, this damage appears to be to the render and due to movements of the surrounding roofing. This has since been covered to prevent roof leaks.



Figure 21 - Chimney damage from 2012 (Extracted from the Opus Report)

The above is not considered to be a comprehensive list of damage to the structure, further damaged structural elements may be discovered during repairs and construction. Based on the assessments and observed damage it is considered reasonable to assume that minor pre-existing defects (such as shrinkage cracking) would have been exacerbated by seismic movement in some locations.

#### 6.0 SEISMIC ANALYSIS

#### 6.1 DESIGN STANDARDS USED

The following design standards have been used during the detailed seismic assessment:

NZS1170.0:2002 - Structural Design Actions - General Principles

NZS1170.1:2002 - Permanent, imposed other actions

NZS1170.5:2004- Seismic Design Actions (NZ)

NZS3101:2006 - Design of Concrete Structures

The Seismic Assessment of Existing Buildings – Technical Guidelines for Engineering Assessments (July 2017)

In addition, code commentaries for the above codes.

#### 6.2 SEISMIC LOAD PARAMETERS AND COEFFICIENTS

#### Hazard Factors from AS/NZS1170.5

Importance Level = 2
Soil Class = D

Z = 0.3 (Hazard factor - Christchurch)

R = 1.0 (ULS Return Period = 1/500)

N(T,D) = 1.0 Period = >0.4s

E

18

#### 6.3 SEISMIC ANALYSIS APPROACH

Loads are distributed via flexible diaphragm therefore a traditional equivalent static approach is used, each bracing element "collects" load based on the tributary area it supports. This approach uses two dimensional calculations as per section C2.7.1 of the MBIE Guidelines, CI.6.2 NZS1170.5:2004.

#### 6.4 BUILDING DUCTILITIES

#### Reinforced Concrete Columns

 $\mu = 1.0$  Cantilevered reinforced concrete columns. There is little redundancy in the system and reinforcing of this era (plain round bars) cannot be relied upon to behave in a ductile manner.

#### **URM Elements**

 $\mu = 1.0$  (Brittle failure mechanism)

#### **Diaphragms**

 $\mu = 1.0$  (collector elements)

#### **Foundations**

 $\mu$  = 1.0 for foundations elements which form the bracing system for the structure (e.g. cantilever pad foundations).

#### 6.5 SITE GEOLOGY

No geotechnical report was available at the time of this assessment. However, nearby boreholes and hand augers available on the New Zealand Geotechnical Database (NZGD) have been reviewed by FCEL to determine the most likely subsoil structure.

The site geology can have significant impact on the level of loading imparted on a building during an earthquake. Deep, soft soil conditions tend to amplify the ground motions, increasing the forces on a building structure.

From the available nearby data (4 Hand Augers and Scala Penetrometer assessed approximately 250m to the west of the site) dense gravels are available at shallow depths, with all four tests at the nearby site refusing at 600mm below ground level (or less).

A site subsoil class of D (deep or soft soil) has been assumed based on existing knowledge of the area of Christchurch.

It should be noted that no liquefaction or lateral spread analysis has been carried out on the soils although given knowledge of the area and information from NZGD, this mechanism is considered unlikely as it is reliant upon different ground composition.

#### 6.6 ASSUMPTIONS

The following assumptions have been made in completing this detailed seismic assessment:

Base shear has been assumed to be taken out by the foundation piles and foundation pads.

The URM assessment has been completed as per section C7.6 of the MBIE Guidance Documents ("Assessment of Masonry Infill for Out-of-Plane Actions") which allows the use of "arching" action of the masonry for out of plane movements. For this action to begin, the masonry must be secured to the bounding frame. FCEL considers that the concrete corbels provide this restraint and the

veneer ties throughout the URM panels enable these corbels to act in both directions and for both URM layers. Arching action has been considered available in the columns only as the corbels were not drawn or observed in the sill beams.

Veneers have been assessed independently of each other as the veneer ties are not rigid and cannot enable the URM to act as one deep unit.

#### Material Property Assumptions

Reinforced Concrete:  $f'_c = 20 \text{ MPa}$ 

Reinforcing Steel:  $f_y = 270 \text{ MPa} \text{ (Table C5C.2)}$ 

URM Mortar:  $f'_1 = 2-5MPa$  (Table C8.4)

Probable Cohesion c = 0.1 MPa (Cracked), 0.5 MPa

(Uncracked) (Table C8.4)

URM Block:  $f'_c = 14MPa$  (assumed)

URM System:  $f'_b = 6.7 - 8.8 MPa$  (Table C8.5)

#### 7.0 ASSESSED EARTHQUAKE RATINGS

As per Part A of The Seismic Assessment of Existing Buildings – Technical Guidelines for Engineering Assessments, dated July 2017 a Structural Weakness (SW) is defined as "An aspect of the building structure and/or the foundation soils that scores less than 100%NBS. An aspect of the building structure scoring less than 100%NBS but greater than or equal to 67%NBS is still considered to be a structural weakness even though it is considered to represent an acceptable risk." Based on this definition and the carried out detailed seismic assessment the SW's of the structure for each section can be summarised as detailed below.

#### 7.1 SIDE WALLS

Element	Failure Mode	%NBS
Reinforced concrete columns (Out-of-plane)	Bending of concrete columns, reinforcing yield	40%
Foundation of reinforced columns (Out-of-plane)	Foundation overturning (assumed to occur before bearing failure)	30%
Infill Panels, Grids 1-6 and 9-11 (Out-of- plane)	Shear failure of unreinforced masonry within bounding frame	80%
Infill Panels, Grids 6-8 (Out-of-plane)	Shear failure of unreinforced masonry within bounding frame	25%
In plane bracing	Bending of short columns above masonry infill	80%

7.2 END WALLS

Element	Failure Mode	%NBS
Reinforced concrete columns/beams Grid 1	Bending of concrete beams, reinforcing yield, following foundation overturning	20%
Foundation overturning Grid 1	Foundation overturning (occurs before soil yield)	30%
Reinforced concrete columns/beams Grid 11	Bending of concrete beams, reinforcing yield, following foundation yield	55%
oundation overturning Grid 11	Foundation overturning (occurs before soil yield)	55%
nfill panels grid 1	Shear failure of unreinforced masonry within bounding frame	30%
nfill panels grid 11	Shear failure of unreinforced masonry within bounding frame	15%

#### 7.3 MISCELLANEOUS

Element	Failure Mode	%NBS
Reinforced concrete chimney flue	Moment capacity of the side walls to the chimney flue	15%
Chimney foundation	Overturning of the foundation in both directions	20%
Roof bracing	Buckling of timber strut in compression	15%
Reinforced masonry wall at entry and at store.	No details provided so capacity could not be assessed. Assumed to be reinforced and cantilevering about the base (subject to further verification).	N/A Indicative range if as assumed. (20% - 40%).

#### 8.0 CONCLUSION

#### 8.1 DISCUSSION

The results of the DSA indicate the building's earthquake rating to be 15%NBS (IL2) assessed in accordance with the guideline document *The Seismic Assessment of Existing Buildings* – Technical Guidelines for Engineering Assessments, dated July 2017. The earthquake rating assumes that Importance Level 2 (IL2), in accordance with the Joint Australian/New Zealand Standard – Structural Design Actions Part 0, AS/NZS 1170.0:2002, is appropriate.

A building with an earthquake rating less than 34%NBS fulfils one of the requirements for the Territorial Authority to consider it to be an EPB in terms of Building Act 2004. A building rating less than 67%NBS is considered as an Earthquake Risk Building (ERB) by the New Zealand Society for Engineering. 524 Pound Road, the Yaldhurst Memorial Hall is therefore categorised as an EPB.

The rating of the building is limited by the strength of the reinforced concrete chimney, the infill masonry infill panels, and roof bracing.

#### 8.2 RECOMENDATIONS

Despite the apparent high rating in the out of plane direction of some of the infill masonry elements, it is considered good practice to remove these elements from the property as they pose a risk of sudden brittle failure in the event that the assessed capacities are exceeded, such failures are not considered appropriate in modern earthquake standards. It is therefore FCEL's opinion that all unreinforced masonry elements be strengthened and/or replaced as part of any works to this structure.



#### Summary of Strengthening Required to Achieve 34%NBS and 67%NBS

- Removal or significant strengthening of the chimney structure.
- Removal or strengthening of the infill masonry panels.
- Introduce horizontal roof trusses or diaphragms to improve end wall and roof load transfers.
- Confirm reinforcing in masonry wall at entry lobby. Ensure diaphragm connects masonry to main structure.
- Strengthen reinforced concrete columns. (Introduce new portal frames).

The scope of the works required to achieve the two thresholds noted above will vary for each of the highlighted elements and remains subject to full detailed design.

#### 8.3 OCCUPANCY

FCEL have been advised by CCC that their occupancy policy notes the following:

- "Buildings which have a seismic capacity of 33% NBS or less and have significant damage (as defined by MBIE) shall not be occupied."
- "Buildings which have a seismic capacity of 33% NBS or less and have brittle collapse mechanisms shall not be occupied."
- "All other buildings are generally fit to occupy."

Based on this policy the building is deemed not fit to occupy as the structure is rated at less than 33%NBS and has brittle failure mechanisms.

If occupancy is required prior to strengthening temporary shoring options are available to achieve short term occupancy.

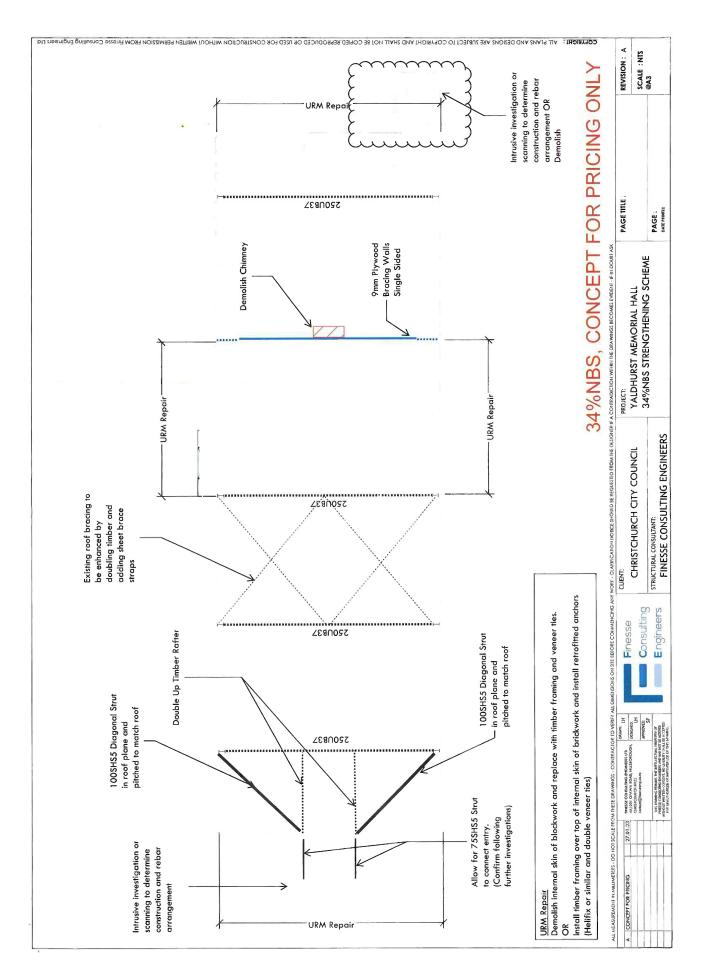
#### 9.0 LIMITATIONS

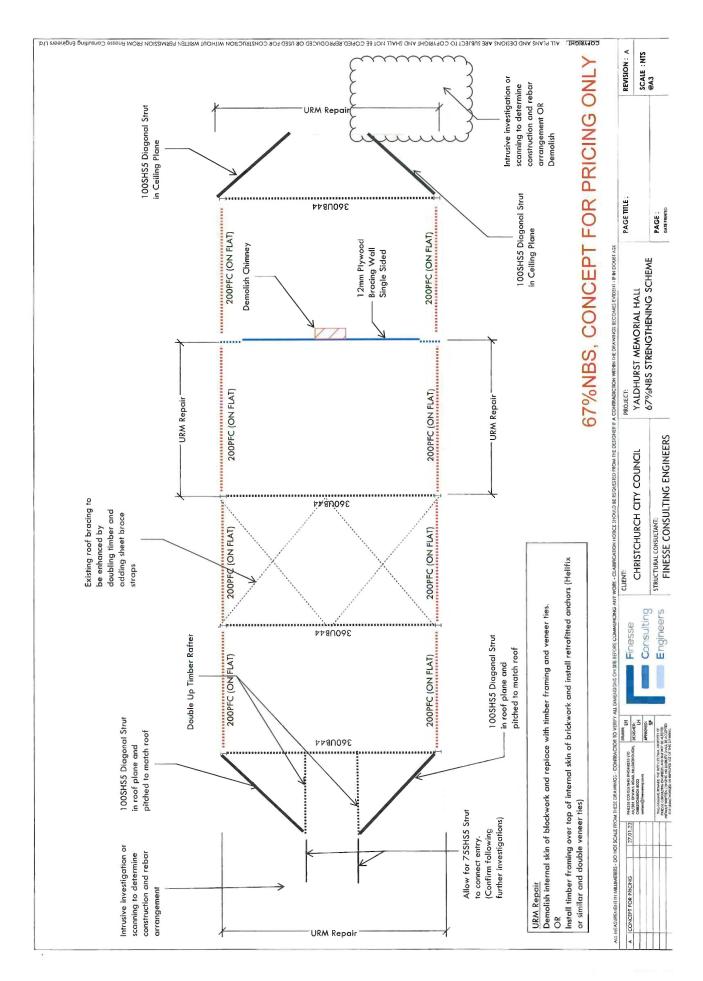
This report is for the use by CCC only, and should not be used or relied upon by any other person or entity or for any other project.

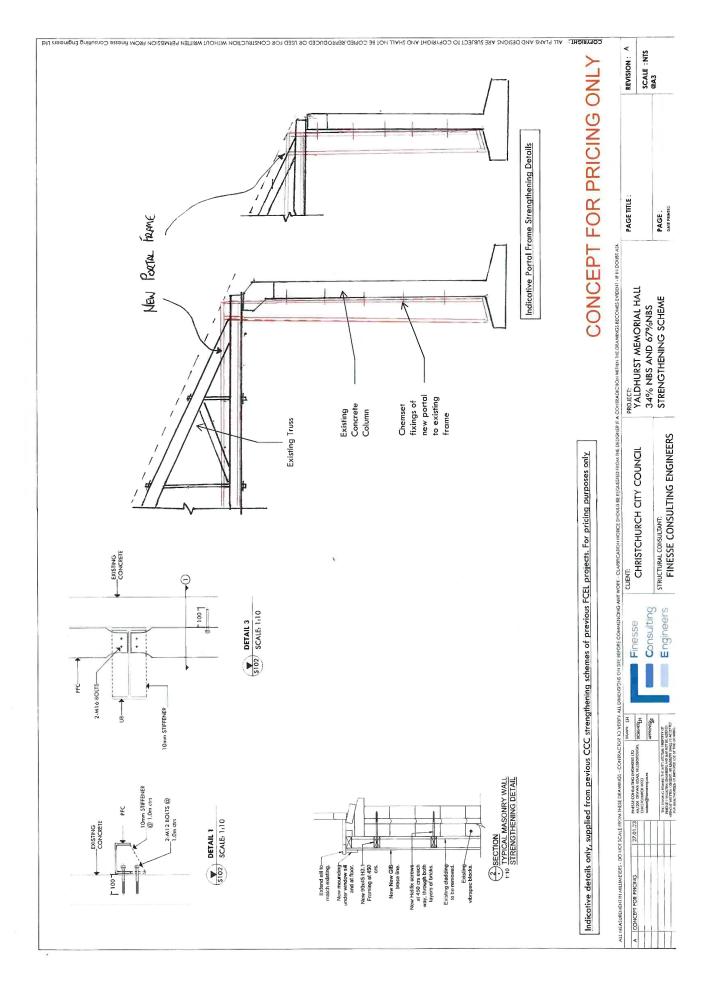
This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and FCEL. No responsibility is accepted by FCEL or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.

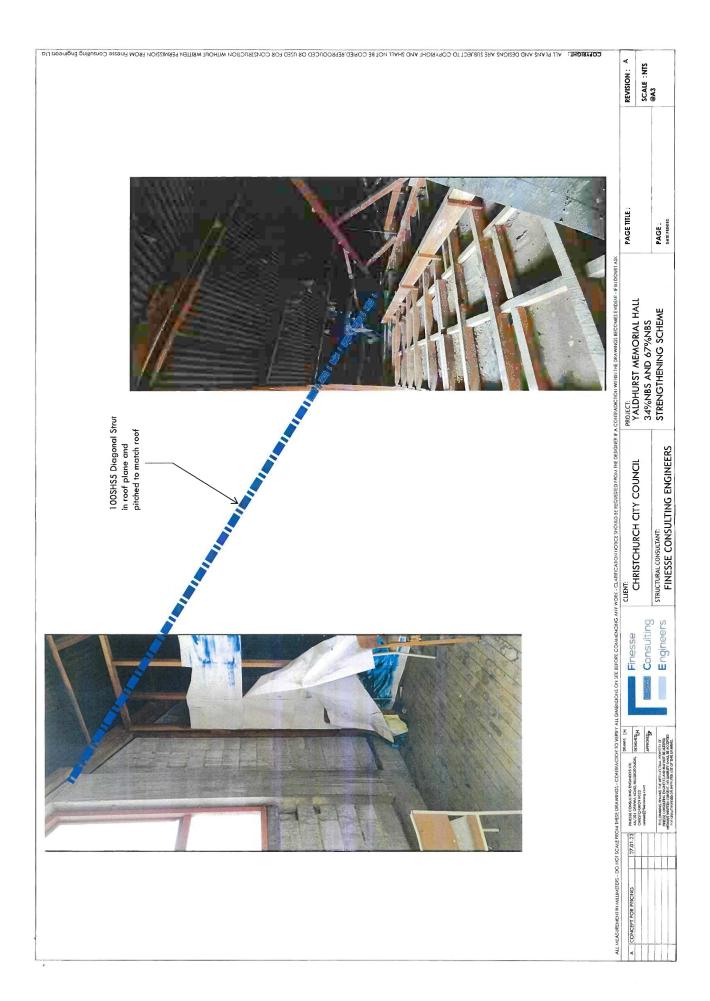
Our visual observations of the building were limited to a high level examination of the building where safe and ready access existed at the time of the inspection. No intrusive examinations or testing of any building elements were undertaken as part of these observations other than as noted in this report. No geotechnical investigations were carried out.

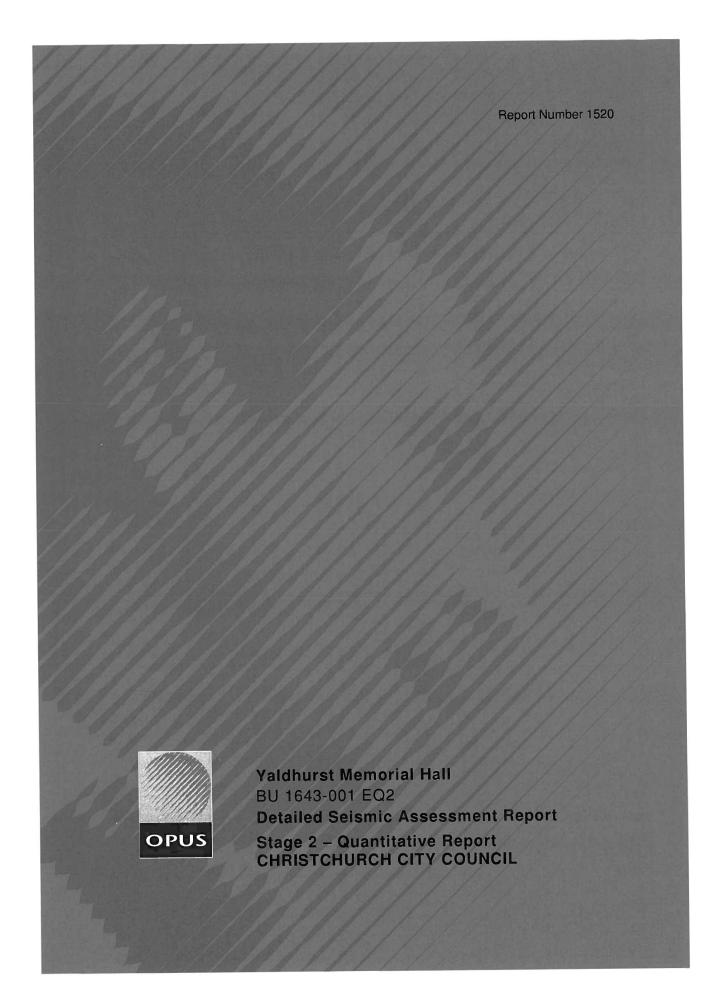
The obervations have been limited of structural aspects only. Our observations did not include assessment of any other elements of the building or services. Items such as fire safety systems, the glazing systems, racking ,finishes, suspended ceilings, partitions, tenant fit-out, power, water, sewerage, mechanical services and architectural elements have not been reviewed as part of this evaluation.













Report Number 1520

Yaldhurst Memorial Hall Detailed Engineering Evaluation Stage 2 – Quantitative Report

Corner of Yaldhurst Road and Pound Road, Yaldhurst, Christchurch

**Christchurch City Council** 

Opus International Consultants Ltd Dunedin Office Opus House, 197 Rattray Street Private Bag 1913, Dunedin 9054 New Zealand

Telephone:

+64 3 471 5500

Facsimile:

+64 3 474 8995

Date:

September 2012

Reference: Status: 6-QUCCC.44

Report No.

1520

Final

© Opus International Consultants Ltd 2012

Yaldhurst Memorial Hall BU 1643-001 EQ2

Detailed Engineering Evaluation Quantitative Report – SUMMARY Final

Corner of Yaldhurst Road and Pound Road, Christchurch

#### **Background**

This is a summary of the Quantitative report for the Yaldhurst Memorial Hall building, and is based on the Detailed Engineering Procedure document (draft) issued by the Structural Advisory Group on 19 July 2011, visual inspection on 22 February 2012, limited intrusive investigations on 11 April 2012 and available drawings. No original structural calculations are available for this building.

#### **Key Damage Observed**

The following damage to structural elements has been observed:

- Cracks between RC columns and masonry panels all elevations
- · Vertical cracks to blockwork on north gable
- Horizontal and vertical cracks on porch at north end
- Fine stepped cracks in blockwork to west elevation
- · Fine horizontal cracks to RC columns above and below window openings west elevation.
- Hairline cracks to RC columns at low level.
- · Horizontal crack to lean-to store south elevation.
- Localised horizontal cracking below windows east elevation.
- · Cracks to RC chimney stack at centre of property.
- Cracks to some corbels supporting roof trusses.
- Crack across floor slab in porch.
- Some horizontal and stepped cracking on URM infill panels internally.

#### **Indicative Building Strength**

Based on the information available, and from undertaking a quantitative assessment, the building's capacity has been assessed to be less than 34%NBS along and across the building. The main limitations are the out of plane strength of the blockwork panels, the flexural capacity of the RC columns and the overturning capacity of the column foundations. The building's post-earthquake capacity is in the order of 6%NBS being the minimum value that can be attributed to the infill blockwork panels. The transverse capacity of the RC columns is about 24% NBS for both the columns and the foundations.

The building has been assessed to have a seismic capacity of less than 34%NBS and is therefore classed as earthquake prone.

#### Recommendations

It is recommended that:

- The CCC reviews the on-going occupancy of this building until such time that any strengthening works have been undertaken.
- b) A strengthening scheme be developed to increase the overall capacity of the building to at least 67%NBS.
- c) Provide a cordon around the full perimeter of the building.

### Yaldhurst Memorial Hall Detailed Engineering Evaluation

## Contents

1	Introduction	1
2	Compliance	1
3	Earthquake Resistance Standards	5
4	Building Description	6
5	Damage Assessment	9
6	Detailed Seismic Assessment	10
7	Geotechnical Assessment	13
8	Conclusions	13
9	Recommendations	14
10	Limitations	14
11	References	14
Appe	endix A – Photographs	
Appe	endix B – Drawings	
Appe	endix C – CERA Data Sheet	



# 1 Introduction

Opus International Consultants Ltd has been engaged by the Christchurch City Council (CCC) to undertake a detailed engineering evaluation of the Yaldhurst Memorial Hall.

This report is a Stage two, Quantitative assessment of the building structure, and is based on the Detailed Engineering Evaluation Procedure document (draft) issued by the Structural Engineering Society (SECOC) on 19 July 2011.

The purpose of the assessment is to determine if the building is classed as being earthquake prone in accordance with the Building Act 2004.

The seismic assessment and reporting have been undertaken based on the qualitative and quantitative procedures detailed in the Detailed Engineering Evaluation Procedure (DEEP) document (draft) issued by the Structural Engineering Society (SESOC) on 19 July 2011.

A qualitative assessment report was issued on 7 March 2012. The qualitative assessment noted that the building had a seismic capacity of 10%NBS.

# 2 Compliance

This section contains a brief summary of the requirements of the various statutes and authorities that control activities in relation to buildings in Christchurch at present.

# 2.1 Canterbury Earthquake Recovery Authority (CERA)

CERA was established on 28 March 2011 to take control of the recovery of Christchurch using powers established by the Canterbury Earthquake Recovery Act enacted on 18 April 2011. This act gives the Chief Executive Officer of CERA wide powers in relation to building safety, demolition and repair. Two relevant sections are:

# Section 38 - Works

This section outlines a process in which the chief executive can give notice that a building is to be demolished and if the owner does not carry out the demolition, the chief executive can commission the demolition and recover the costs from the owner or by placing a charge on the owners' land.

# Section 51 - Requiring Structural Survey

This section enables the chief executive to require a building owner, insurer or mortgagee to carry out a full structural survey before the building is re-occupied.

We understand that CERA will require a detailed engineering evaluation to be carried out for all buildings (other than those exempt from the Earthquake Prone Building definition in the Building Act). It is anticipated that CERA will adopt the Detailed Engineering Evaluation Procedure (DEEP) document (draft) issued by the Structural Engineering Society (SESOC) on 19 July 2011. This document sets out a methodology for both initial qualitative and detailed quantitative assessments.

It is anticipated that a number of factors, including the following, will determine the extent of evaluation and strengthening level required:

1

6-QUCCC.44

September 2012

O

- 1. The importance level and occupancy of the building.
- 2. The placard status and amount of damage.
- 3. The age and structural type of the building.
- 4. Consideration of any critical structural weaknesses.

We anticipate that any building with a capacity of less than 34% of new building standard (including consideration of critical structural weaknesses) will need to be strengthened to a target of 67% as required by the CCC Earthquake Prone Building Policy.

### 2.2 Building Act

Several sections of the Building Act are relevant when considering structural requirements:

#### Section 112 - Alterations

This section requires that an existing building complies with the relevant sections of the Building Code to at least the extent that it did prior to the alteration.

This effectively means that a building cannot be weakened as a result of an alteration (including partial demolition).

## Section 115 - Change of Use

This section requires that the territorial authority (in this case Christchurch City Council (CCC)) is satisfied that the building with a new use complies with the relevant sections of the Building Code 'as near as is reasonably practicable'.

This is typically interpreted by CCC as being 67% of the strength of an equivalent new building. This is also the minimum level recommended by the New Zealand Society for Earthquake Engineering (NZSEE).

### Section 121 - Dangerous Buildings

This section was extended by the Canterbury Earthquake (Building Act) Order 2010, and defines a building as dangerous if,

- 1. In the ordinary course of events (excluding the occurrence of an earthquake), the building is likely to cause injury or death or damage to other property; or:
- 2. In the event of fire, injury or death to any persons in the building or on other property is likely because of fire hazard or the occupancy of the building; or
- 3. There is a risk that the building could collapse or otherwise cause injury or death as a result of earthquake shaking that is less than a 'moderate earthquake' (refer to Section 122 below); or
- 4. There is a risk that other property could collapse or otherwise cause injury or death; or
- 5. A territorial authority has not been able to undertake an inspection to determine whether the building is dangerous.

6-QUCCC.44



# Section 122 - Earthquake Prone Buildings

This section defines a building as earthquake prone if its ultimate capacity would be exceeded in a 'moderate earthquake' and it would be likely to collapse causing injury or death, or damage to other property.

A moderate earthquake is defined by the building regulations as one that would generate loads 33% of those used to design an equivalent new building.

#### Section 124 - Powers of Territorial Authorities

This section gives the territorial authority the power to require strengthening work within specified timeframes or to close and prevent occupancy to any building defined as dangerous or earthquake prone.

## Section 131 - Earthquake Prone Building Policy

This section requires the territorial authority to adopt a specific policy for earthquake prone, dangerous and insanitary buildings.

## 2.3 Christchurch City Council Policy

Christchurch City Council adopted their Earthquake Prone, Dangerous and Insanitary Building Policy in 2006. This policy was amended immediately following the Darfield Earthquake on 4<sup>th</sup> September 2010.

The 2010 amendment includes the following:

- 1. A process for identifying, categorising and prioritising Earthquake Prone Buildings, commencing on 1 July 2012;
- A strengthening target level of 67% of a new building for buildings that are Earthquake Prone;
- 3. A timeframe of 15-30 years for Earthquake Prone Buildings to be strengthened; and,
- 4. Repair works for buildings damaged by earthquakes will be required to comply with the above.

The council has stated their willingness to consider retrofit proposals on a case by case basis, considering the economic impact of such a retrofit.

If strengthening works are undertaken, a building consent will be required. A requirement of the consent will require upgrade of the building to comply 'as near as is reasonably practicable' with:

- The accessibility requirements of the Building Code.
- The fire requirements of the Building Code. This is likely to require a fire report to be submitted with the building consent application.

# 2.4 Building Code

The Building Code outlines performance standards for buildings and the Building Act requires that all new buildings comply with this code. Compliance Documents published by

6-QUCCC.44

September 2012

3



The Department of Building and Housing can be used to demonstrate compliance with the Building Code.

On 19 May 2011, Compliance Document B1: Structure was amended to include increased seismic design requirements for Canterbury as follows:

- 36% increase in the basic seismic design load for Christchurch (Z factor increased from 0.22 to 0.3);
- Increased serviceability requirements.

# 2.5 Institution of Professional Engineers New Zealand (IPENZ) Code of Ethics

One of the core ethical values of professional engineers in New Zealand is the protection of life and safeguarding of people. The IPENZ Code of Ethics requires that:

Members shall recognise the need to protect life and to safeguard people, and in their engineering activities shall act to address this need.

- 1.1 Giving Priority to the safety and well-being of the community and having regard to this principle in assessing obligations to clients, employers and colleagues.
- 1.2 Ensuring that responsible steps are taken to minimise the risk of loss of life, injury or suffering which may result from your engineering activities, either directly or indirectly.

All recommendations on building occupancy and access must be made with these fundamental obligations in mind.

6-QUCCC.44



4

# 3 Earthquake Resistance Standards

For this assessment, the building's earthquake resistance is compared with the current New Zealand Building Code requirements for a new building constructed on the site. This is expressed as a percentage of new building standard (%NBS). The loadings are in accordance with the current earthquake loading standard NZS1170.5 [1].

A generally accepted classification of earthquake risk for existing buildings in terms of %NBS that has been proposed by the NZSEE 2006 [2] is presented in Figure 1 below.

Description	Grade	Risk	%NBS	Existing Building Structural Performance	Improvement of Structural Performance		
					Legal Requirement	NZSEE Recommendation	
Low Risk Building	A or B	Low	Above 67	Acceptable (improvement may be desirable)	The Building Act sets no required level of structural improvement (unless change in use)	100%NBS desirable. Improvement should achieve at least 67%NBS	
Moderate Risk Building	B or C	Moderate	34 to 66	Acceptable legally. Improvement recommended	This is for each TA to decide. Improvement is not limited to 34%NBS.	Not recommended. Acceptable only in exceptional circumstances	
High Risk Building	D or E	High	33 or lower	Unacceptable (Improvement required under Act)	 Unacceptable	Unacceptable	

Figure 1: NZSEE Risk Classifications Extracted from table 2.2 of the NZSEE 2006 AISPBE Guidelines

Table 1 below compares the percentage NBS to the relative risk of the building failing in a seismic event with a 10% risk of exceedance in 50 years (i.e. 0.2% in the next year). It is noted that the current seismic risk in Christchurch results in a 6% risk of exceedance in the next year.

Table 1: %NBS compared to relative risk of failure

Percentage of New Building Standard (%NBS)	Relative Risk (Approximate)		
>100	<1 time		
80-100	1-2 times		
67-80	2-5 times		
33-67	5-10 times		
20-33	10-25 times		
<20	>25 times		

OPUS

#### 3.1 Minimum and Recommended Standards

Based on governing policy and recent observations, Opus makes the following general recommendations:

# 3.1.1 Occupancy

The Canterbury Earthquake Order<sup>1</sup> in Council 16 September 2010, modified the meaning of "dangerous building" to include buildings that were identified as being EPB's. As a result of this, we would expect such a building would be issued with a Section 124 notice, by the Territorial Authority, or CERA acting on their behalf, once they are made aware of our assessment. Based on information received from CERA to date, this notice is likely to prohibit occupancy of the building (or parts thereof) until its seismic capacity is improved to the point that it is no longer considered an EPB.

### 3.1.2 Cordoning

 Where there is an overhead falling hazard, or potential collapse hazard of the building, the areas of concern should be cordoned off in accordance with current CERA/Christchurch City Council guidelines.

## 3.1.3 Strengthening

- Industry guidelines (NZSEE 2006 [2]) strongly recommend that every effort be made to achieve improvement to at least 67%NBS. A strengthening solution to anything less than 67%NBS would not provide an adequate reduction to the level of risk.
- It should be noted that full compliance with the current building code requires building strength of 100%NBS.

# 3.1.4 Our Ethical Obligation

In accordance with the IPENZ code of ethics, we have a duty of care to the public. This obligation requires us to identify and inform CERA of potentially dangerous buildings; this would include earthquake prone buildings

# 4 Building Description

# 4.1 Background Information

Exterior and interior photographs of notable facets of the Yaldhurst Memorial Hall complex are presented in Appendix A.

Drawings of the building have been provided. The more important drawings reviewed as part of this assessment are included in Appendix B of this report.

6-QUCCC.44

September 2012

6



<sup>&</sup>lt;sup>1</sup> This Order only applies to buildings within the Christchurch City, Selwyn District and Waimakariri District Councils authority

A post February Earthquake site visit was undertaken on 11 March 2011 and there were concerns about the stability of some of the masonry, particularly on the high north gable wall. A further visit was made on 21 February 2012, to ascertain the accuracy of dimensions and overall layout of the building and to obtain as much information as possible regarding the construction of the building. The survey confirmed that the record drawings were accurate in terms of layout. A further, partially intrusive investigation was carried out at this property on 11 April 2012. In this investigation a sample of the foundations were exposed with small trial pits and the masonry infill panels were inspected to ascertain their make-up, thickness and to assess if wall ties are present.

Some assumptions have been made in the detailed assessment where information was unavailable.

## 4.2 Building Description

The Yaldhurst Memorial Hall was constructed in 1954 – there is a dedication plaque adjacent to the main entrance confirming this. The building is in four parts, a floor plan and elevation are provided in Appendix B.

- Entrance Lobby: At the north end of the Memorial Hall is a small single storey flat roofed section forming the main entrance lobby, which was apparently added at a later date, as it is not shown on the drawings. This is constructed with rendered concrete block masonry (CMU) and has external concrete steps leading up to it and a concrete floor.
- 2. Memorial Hall: Immediately to the south of the main entrance is the main part of the building. The hall is comprised of timber roof trusses sitting on a reinforced concrete beam which in turn rests on 300mm reinforced concrete columns with reinforced concrete pad footings below each column and strip foundations between to support the in-fill walls. The panels between the columns are in-filled with cavity Unreinforced Masonry (URM) wall panels and most column bays have windows extending for all but a short length of the column bay width. The investigations show the inner leaf of the walls to be 100mm thick Concrete Masonry Units (CMU) and the outer leaf to be 110mm thick Unreinforced Brickwork (URM).
- 3. This main section of the building complex (the main hall) houses a hall and facilities with a stage across the south end. At the north end of the building there is a partial mezzanine first floor accessed by a timber staircase leading up from the west side. The main hall has a maximum eaves height of 4.5m and is approximately 35m long and 11m wide.
- 4. Attached to the south of Memorial Hall is a building of similar construction but of a lower height and shorter length. This houses the 'supper room', committee room and a kitchen. This section of the building has an eaves height of approximately 3.0m and is 10m long by 11m wide. At the step in roof level, between the main hall and this section there is a reinforced chimney serving an open fire-place within the supper room.
- To the south of this a door leads into a small lean to type construction store room, which
  is not shown on the drawings, and was therefore probably added at a later date. This is
  formed with CMU block walls and has a mono-pitched roof sloping down towards the
  south.

6-QUCCC.44



# 4.3 Gravity Load Resisting System

The gravity load bearing system for this property comprises:-

The tied timber roof trusses are at approximately 3.2m centres, supporting timber purlins at approximately 1.0m centres, over which is fixed a lightweight profiled metal roof covering. Timber cross-bracing is provided in the plane of the rafters.

A reinforced concrete frame with a ring beam at eaves level transfers the roof and ceiling loads, via approx. 300x300mm square section columns below roof truss positions which are assumed (from details on the available drawings) to be supported on reinforced concrete pad foundations approximately 1.5m wide. Intermediate reinforced strip foundations support the cavity masonry infill panels between columns and the floor construction and are (likewise based on the drawing details) assumed to be 600mm wide.

The ground floor of the main hall is assumed to be a suspended timber floor construction with joists spanning in the direction of the width of the hall, with timber floorboards over. The drawings indicate two intermediate strip footings along the length of the building, breaking the floor span into thirds of the width of the building.

The floor finishes of the other rooms with floor coverings was not investigated. The ground floor of the main entrance area is a reinforced concrete slab.

## 4.4 Seismic Load Resisting System

# 4.4.1 Longitudinal - North to South Direction

Longitudinal seismic loads are resisted by the moment connection between the columns and the ring beams at eaves level on the east and west elevations and the foundations at ground level, with the support of the masonry infill panels below the window openings, which act in in-plane shear. Due to the typical window openings (most bays) the system is reliant on the columns for the transfer of loads from eaves level to the masonry and frame below. The infill panels of the longitudinal walls can be seen to be painted blockwork externally and are assumed to be of similar construction on the inner leaf. The diagonal timber roof bracing between roof trusses in the plane of the rafters, in conjunction with the purlins will provide some limited resistance to seismic loads in this direction. The ceiling battens will provide no significant diaphragm action. It is assumed that the hardboard ceiling finishes will not provide any diaphragm action.

The two ridges, of the different levels of duo-pitched roof, are not directly connected, but are intersected by the chimney construction and partial gable end wall.

#### 4.4.2 Transverse - East/ West Direction

Transverse seismic loads are resisted by the moment connection between the columns and the beams of the gable elevations and the internal wall at the step in roof level, along with the moment connection between the columns and the foundations at these same locations at ground level. Support is provided by the inplane shear resistance of the masonry panels between the columns at the gables and the internal wall along the line of the chimney.

6-QUCCC.44



The purlins will provide some transfer of seismic loads between roof trusses in this direction. The timber ceiling battens and hardboard ceiling finishes are assumed to provide no significant diaphragm action.

At the front elevation, it could be seen from inside the building that the inner leaf is 100mm blockwork and the outer leaf clay brick with a cavity between. This is rendered externally. With access to the cavity given at the time of the survey only by a narrow gap between the masonry and concrete frame for inspection, there did not appear to be any connections tying the masonry panels of this elevation to the reinforced concrete frame. The drawings also provide no evidence of such connections, or of cavity ties.

It should be noted that for the north gable elevation, the outer bay of the frame on each side is a completely infilled with masonry at high level, but the central bay comprises mainly openings over its full height. Loads can therefore be transferred only by the beams of the frame from one side of the gable wall to the other, including the transfer of in-plane seismic loads.

# 5 Damage Assessment

A damage assessment survey of internal and external structural elements was carried out by Opus on 21 February 2012. The inspection included a limited external and internal visual inspection of readily visible structural elements.

Key damage observed includes:

- · Cracking to the elevations between the reinforced concrete frame and the masonry infill panels
- Diagonal stepped shear cracking in the masonry wall panels on the east and west elevations, between the reinforced concrete columns
- Cracking of the reinforced concrete columns at construction joints
- · Cracking of the porch construction masonry
- Cracking of the masonry of the lean-to store structure to the south elevation
- Cracking on the reinforced concrete chimney where it is exposed between the two roof levels.

### 5.1 North Elevation (main entrance)

There is vertical cracking to the gable elevation either side of the central column locations, suggesting a separation between the concrete frame and the masonry infill panels.

There is vertical and diagonal cracking to the masonry of the porch construction below the window opening.

There is horizontal cracking to the wing walls of the porch construction just above the internal floor level.

# 5.2 South Elevation (rear gable)

There is a significant horizontal crack in the lean-to store room, extending from the south west corner of the building at lintel height and extending to the masonry panel between the window openings one block course below lintel height.

9

6-QUCCC.44



Similar to the North elevation, cracks are evident between the concrete frame and the masonry panel, indicative of separation

# 5.3 West Elevation (facing car park)

There are some fine stepped cracks in the infill cavity panels below the ground floor windows. These run mainly through the joints.

At the reinforced concrete columns there are some fine horizontal cracks above and below the window openings at what appear to be construction joint locations.

Some columns have a number of hairline horizontal cracks in their lower section, in the zone of the infill masonry panel contiguity, suggesting out-of-plane flexure.

That window opening, located in the second infill wall bay from the north gable, has a diagonal crack extending upwards and away from the opening.

There are generally cracks between the columns and the adjoining masonry panels, suggesting a degree of separation between the two.

There is a diagonal stepped crack at the south corner of the building, extending from foundation level at the door opening upwards towards lintel height at the corner of the building.

#### 5.4 East Elevation

Generally, this elevation shows little sign of damage, but there is localised horizontal cracking below some window openings.

Within the roof attic space, it was noted that there were cracks present in the lower face of the corbelled pad-stones at column supports for the second and third roof trusses from the north gable. (Not all pad-stones were inspected.) This may be due to spalling of the concrete through damage, or due to poor compaction during construction.

A limited inspection of the construction of the north gable wall cavity was possible because of a convenient void which had opened up due to mortar loss between the inner leaf of the masonry infill panel and the concrete frame, No mechanical connections between the frame and the infill panels, either horizontally or vertically, and no wall cavity ties between the two leaves (wythes) of masonry were visible at this location (but ties were observed elsewhere during the intrusive inspection.)

The floor slab in the porch is cracked across its width (north to south)

There is horizontal cracking in the URM cavity infill wall panels, readily visible in the toilet area, at the north west corner of the building, at or close to lintel height.

#### 6 Detailed Seismic Assessment

# 6.1 Critical Structural Weakness

As outlined in the Critical Structural Weakness and Collapse Hazards draft briefing document, issued by the Structural Engineering Society (SESOC) on 7 May 2011, the term 'Critical Structural Weakness' (CSW) refers to a component of a building that could contribute to increased levels of damage or cause premature collapse of the building.

With the level of information currently available the following potential CSW's were identified during the qualitative stage and checked during this quantitative assessment.

6-QUCCC.44



## 6.1.1 Cavity Walls

The cavity infill unreinforced masonry walls have no mechanical connection to their surrounding beams or columns and so represent a falling hazard for occupants and pedestrians in that they may "pop-out" of the building during a significant seismic event.

#### 6.1.2 Short Columns

The reinforced concrete columns between the windows on the three exposed elevations may be behaving as "short columns" due to deflection constraint provided by the infill cavity wall panels. The concrete columns are not adequately reinforced with steel to resist the redistributed forces to which they could be subject to in a large seismic event. The longer columns of the main hall will tend to redistribute a proportion of the seismic load to the stiffer short columns of the lower hall. However, depending upon the principal direction of actual seismic loading it is possible that the infill masonry panel would fail in an out-of-plane mode prior to the "short column effect" mechanism causing potential building collapse. Notwithstanding this the "short column" mechanism must be protected against in the event that it is decided to repair the infill walls as part of a seismic retrofit strategy.

# 6.1.3 Chimney

The reinforced concrete chimney effectively forms a "short column" between the two ridge lines of the stepped roof levels, as evidenced by the cracking patterns. The chimney has sustained significant damage, with vertical cracking and spalling of concrete and horizontal cracking at the mid height between the ridges

# 6.2 Seismic Parameters

The seismic design parameters based on current design requirements from NZS1170 for this building are:

- Site soil class: D Soft Soil, clause 3.1.3 NZS 1170.5:2004
- Importance Level 2 structure (for a building where no more than 300 people can congregate) with a 50 year design life
- Site hazard factor, Z = 0.3, SESOC Christchurch Seismic Design Load levels Interim Advice, Building Code B1/VM1 amendment, August 2011,
- Return period factor Ru = 1.0 from table 3.5 NZS1170.5:2004, for an importance level 2 building. (Note: should the building be identified as being an importance level 3 structure where more than 300 people can congregate, then Ru = 1.3).

Based on our assessment of the structural drawings, our initial estimates for the expected minimum structural ductility factors for the main reinforced concrete frame seismic resisting systems are:

- μmax = 1.25, Transverse (East to West direction)
   and
- μmax = 1.25, Longitudinal (North to South direction)

OPUS

The ductility factor is restricted in the transverse direction because no concrete beams are designed in this direction parallel to the roof trusses (except at the building ends and change of roof pitch at chimney), so the only moment resisting capacity is located at column to footing connection, which is of marginal capacity.

The out-of-plane capacity of the infill URM cavity walls governs the building capacity overall, and for this action, a ductility factor of 1.25 was assessed as most appropriate.

The CMU compressive strength was assumed as f'b = 20 MPa

### 6.3 Quantitative Assessment Results

A summary of the structural performance of the building is shown in the table below. Note that the values given represent the worst performing elements in the building, as these effectively define the building's capacity. Other elements within the building will have significantly greater capacity when compared with the governing elements.

The results are tabulated as follows:-

**Table 2: Summary of Seismic Performance** 

Structural Element/System	Failure mode or description of limiting criteria based on elastic capacity of critical element	Critical Structural Weakness and Collapse Hazard	% NBS based on calculated capacity	
Cavity Wall, out of plane at 4.5m. section at entrance	Out-of-plane instability due to excessive deflection.	Yes	6-11% NBS	
Cavity Wall out of plane at 3.0m section between windows	Out-of-plane instability due to excessive deflection.	Yes	8-15% NBS	
R.C. Columns loaded in transverse direction	Flexural failure of the reinforced 300mm concrete columns that must support the mass of the cavity walls.	Yes	24% NBS	
Footings of transversely loaded R.C. columns	Overturning failure of the pad footing beneath the columns	Yes	24% NBS	

# 6.4 Discussion of results

Based on the information available, the building has been assessed as having a seismic capacity of 6% of new building standard (%NBS), using the detailed engineering evaluation process (New Zealand Society for earthquake engineering, "Assessment and Improvement of the Structural Performance of Buildings in Earthquakes, 2006)[2]"

The overall capacity was limited by the out of plane strength of the masonry infill panels. The RC columns are rated at 24%NBS in the transverse direction due to possible flexural failure or overturning failure of the foundations.

As the building has a capacity of less than 34% NBS it is defined as earthquake prone in accordance with the Building Act 2004. The building therefore has a relative risk of failure of over 25 times that of a building constructed to the new building standard. We recommend that the CCC review the on-going occupancy of this building until such time that any strengthening works have been undertaken. It is recommended that a cordon to 1.0 times the building height be placed around all URM walls.

6-QUCCC.44

September 2012

OPUS

#### 6.5 Limitations on Assumptions and Results

Our analysis and assessment is based on an assessment of the building in its undamaged state. Therefore the current capacity of the building will be lower than that stated.

The results have been reported as a %NBS and the stated value is that obtained from our analysis and assessment. Despite the use of best national and international practice in this analysis and assessment, this value contains uncertainty due to the many assumptions and simplifications which are made during the assessment. These include:

- Simplifications made in the analysis, including boundary conditions such as foundation fixity;
- Assessments of material strengths based on limited drawings, specifications and site inspections;
- The normal variation in material properties which change from batch to batch;
- Approximations made in the assessment of the capacity of each element, especially when considering the post-yield behaviour.

# 7 Geotechnical Assessment

The Opus Christchurch geotechnical group have made a desktop study of this area and consider that from the site photos reviewed, and a brief site visit and local shallow excavations, there is no evidence of ground damage at this site. Also, the ECan Solid Facts map suggests the site has low liquefaction potential. No liquefaction was observed near the site, the nearest location of liquefaction was 4.5km east.

A class D soft soil category was assumed but if a structural retrofit of the building complex is to be undertaken then further investigations will be required before any building repairs, in order to confirm bearing capacity and classification.

### 8 Conclusions

- (a) The results obtained from the quantitative engineering calculations indicate that the building has a seismic capacity between 6%-24%NBS with a seismic grade E risk.
- (b) The seismic capacity is limited by the capacity of the cavity walls in both directions and the RC columns and foundations in the transverse direction.
- (c) Strengthening work is required to increase the overall building capacity to at least 67%.
- (d) Earthquake related damage has been noted on a number of structural elements.
- (e) Based on the calculated seismic capacity of the building and the observed damage it is recommended that the CCC review the on-going occupancy of the building and provide a cordon around the building.



# 9 Recommendations

- (a) The building is classed as earthquake prone and it is recommended that the CCC review the ongoing occupancy of the building.
- (b) It is recommended that a cordon be installed around the full perimeter of the building.
- (c) The building should be strengthened to at least 67%NBS.

# 10 Limitations

- (a) This report is based on an inspection of the structure with a focus on the damage sustained from the 22 February 2011 Canterbury Earthquake and aftershocks only. Some non-structural damage is mentioned but this is not intended to be a comprehensive list of non-structural items.
- (b) Our professional services are performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at the time.
- (c) This report is prepared for the CCC to assist with assessing remedial works required for council buildings and facilities. It is not intended for any other party or purpose.

# 11 References

- [1] NZS 1170.5:2004, Structural Design Actions, Part 5 Earthquake Actions New Zealand, Standards New Zealand.
- [2] NZSEE: 2006, Assessment and improvement of the structural performance of buildings in earthquakes, New Zealand Society for Earthquake Engineering.
- [3] NZSEE 2011- Assessment and Improvement of Unreinforced Masonry Buildings for Earthquake Resistance, February 2011.
- [4] Engineering Advisory Group, Guidance on Detailed Engineering Evaluation of Nonresidential buildings, Part 3 Technical Guidance, Draft Prepared by the Engineering Advisory Group, 13 December 2011.
- [5] SESOC, Practice Note Design of Conventional Structural Systems Following Canterbury Earthquakes, Structural Engineering Society of New Zealand, 21 December 2011.

6-QUCCC.44



Appendix A - Photographs

6-QUCCC.44





North Elevation



2. West Elevation



3. East Elevation



4. South Elevation



5. Main Hall - looking North



6. Main Hall - looking South

6-QUCCC.44





Supper Room - looking North towards Chimney



Supper Room – looking South towards Committee Room and Kitchen



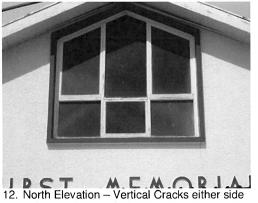
9. Kitchen - looking South West towards side entrance



10. Lean-to Store at South end of Building - looking South



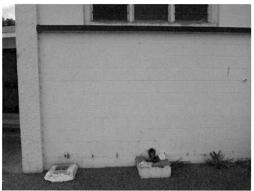
11. Wing wall at Entrance (North/West Elevation) -Horizontal cracking



columns of concrete frame

6-QUCCC.44





13. West Elevation - Stepped Cracks in blockwork



14. West Elevation – separation cracks between columns and masonry panels



15. West Elevation – Horizontal cracks to columns at construction joint locations below windows



West Elevation – stepped cracks in masonry panels



17. West Elevation - Stepped cracking in masonry wall panel



18. Chimney damage

6-QUCCC.44





19. West Elevation – south corner – stepped crack in masonry



20. South Elevation – Horizontal cracks in masonry at lintel height



21. Roof construction



22. Truss supports and eaves beam



23. Eaves beam



24. Dedication Plaque at front entrance



Appendix B – Drawings

6-QUCCC.44





43 Peacock Street PO Box 13-117 Christchurch 8141 New Zealand Ph 03 366 1502 www.thconsultants.co.nz email info@thconsultants.co.nz

Ref. 2098-61 10 March 2020

Yaldhurst Community Committee C/o Sean Dixon 207 Durham Street South Christchurch

#### Yaldhurst Memorial Hall

As requested, TH Consultants has prepared a Detailed Seismic Assessment (DSA) for the Yaldhurst Memorial Hall.

The hall had been classified as an Earthquake Prone Building (EPB) in a seismic assessment provided by Opus International Consultants, Dunedin Office in September 2012.

The TH Consultants DSA is based on the "Seismic Assessment of Existing Buildings" guidelines document published under the auspices of the Ministry of Business Innovation and Employment (MBIE) in July 2017.

These guidelines are an integral part of the EPB methodology produced by MBIE under section 133AV of the Building Act 2004 to identify earthquake-prone buildings.

An Assessment Summary Report is attached.

For engineering assessments being undertaken for potentially earthquake-prone buildings, this summary template meets the requirements of Section 2.5 of the EPB methodology.

The building is assessed as 55 %NBS and classified as Grade C, Medium Earthquake Risk.

**TH Consultants Ltd** 

N R Hanham CPEng, FEngNZ, IntPE(NZ), BE(Hons)

Member of the Association of Consulting Engineers New Zealand

T:\Job files\2098 Dennis Thomson\2098-61 Yaldhurst Hall\5\_2098-61 Engineer\2098-61 20-03-10 DSA Report docx

Yaldhurst Memorial Hall DSA Final

1. Building Information				
Building Name/ Description	Yaldhurst Memorial Hall			
Street Address	524 Pound Road, Yaldhurst, Christchurch 7676 (corner Yaldhurst Road)			
Territorial Authority	Christchurch City Council			
No. of Storeys	One			
Area of Typical Floor (approx.)	400 sq. m.			
Year of Design (approx.)	1953			
NZ Standards designed to	NZSS 95			
Structural System including Foundations	Concrete frames, concrete block infill, Timber truss roof, Concrete perimeter foundation with pads under columns, timber floor on piles			
Does the building comprise a shared structural form or shares structural elements with any other adjacent titles?	No			
Key features of ground profile and identified geohazards	Flat site, assumed silt clay on gravels. No hazards			
Previous strengthening and/or significant alteration	None			
Heritage Issues/ Status	Dedicated as a war memorial			
Other Relevant Information				

Assessment Summary Report

Template Version 1.1 – 14 August 2017

Yaldhurst Memorial Hall DSA Final

2. Assessment Informati	ion
Consulting Practice	TH Consultants Ltd
CPEng Responsible, including:  Name CPEng number A statement of suitable skills and experience in the seismic assessment of existing buildings <sup>1</sup>	Noel Hanham CPEng, FEngNZ, IntPE(NZ), BE(Hons), CPEng # 35759 40 years as a consultant principal specialising in structural engineering Responsible for many building assessments and seismic upgrades. Attended seminars to maintain currency with seismic assessment methods.
Documentation reviewed, including:  • date/ version of drawings/ calculations <sup>2</sup> • previous seismic assessments	1953 Construction issue set of Architectural and Engineering drawings. Opus International Consultants, Dunedin Office, Detailed Seismic assessment Report No. 1520, dated September 2012.
Geotechnical Report(s)	None
Date(s) Building Inspected and extent of inspection	12 August 2014 & 6 December 2018. Walk around inspections
Description of any structural testing undertaken and results summary	None
Previous Assessment Reports	
Other Relevant Information	

<sup>&</sup>lt;sup>1</sup> This should include reference to the engineer's Practice Field being in Structural Engineering, and commentary on experience in seismic assessment and recent relevant training

 $<sup>^{\</sup>rm 2}$  Or justification of assumptions if no drawings were able to be obtained

Yaldhurst Memorial Hall

DSA

Final

Occupancy Type(s) and Importance Level	IL2, Community hall restricted to less than 300 people.	
Site Subsoil Class	D	
For an ISA:		
<ul> <li>Summary of how Part B was applied, including:</li> <li>Key parameters such as μ, S<sub>p</sub> and F factors</li> <li>Any supplementary specific calculations</li> </ul>	Not considered relevant – age of building would always give low result	
For a DSA:		
Summary of how Part C was applied, including:  the analysis methodology(s) used from C2  other sections of Part C applied	C2 - Simple static analysis, single storey building. C5 – Concrete members - $f'c = 25$ MPa, $f_V = 340$ MPa C8 – Masonry Infill – Appendix C8C Charts	
Other Relevant Information		

Yaldhurst Memorial Hall DSA Final

Assessment Status			
(Draft or Final)	Final		
Assessed %NBS Rating	55 %NBS		
Seismic Grade and Relative Risk (from Table A3.1)	Grade C, Medium Risk		
For an ISA:			
Describe the Potential Critical Structural Weaknesses			
Does the result reflect the building's expected behaviour, or is more information/ analysis required?	No - a DSA is recommended <sup>3</sup>		
If the results of this ISA are being used for earthquake prone decision purposes, and elements rating <34%NBS have been identified:	Engineering Statement of Structural Weaknesses and Location	Mode of Failure and Physical Consequence Statement(s)	
For a DSA:		1	
Comment on the nature of Secondary Structural and Non-structural elements/ parts identified and assessed	Infill unreinforced block limitation is co Concrete chimney is reinforced but has timber roof support structure.	•	
Describe the Governing Critical Structural Weakness	Cantilever concrete columns govern ov	verall behaviour	
If the results of this DSA are being used for earthquake prone decision purposes, <u>and</u> elements rating <34%NBS have been identified (including Parts) <sup>4</sup> :	Engineering Statement of Structural Weaknesses and Location	Mode of Failure and Physical Consequence Statement(s)	
Recommendations optional for EPB purposes)	Performance can be improved.		

Assessment Summary Report

Template Version 1.1 – 14 August 2017

 $<sup>^{3}</sup>$  Indicate what form should the DSA take/ what the specific areas to focus on are

<sup>&</sup>lt;sup>4</sup> If a building comprises a shared structural form or shares structural elements with other adjacent titles, information about the extent to which the low scoring elements affect, or do not affect the structure.

#### Yaldhurst Memorial Hall

#### **EPB Status**

Notes of meeting held on 1 September 2020 involving Noel Hanham (NH -TH Consultants), Richard Gant (RG – Council Consenting Unit), Tim Priddy (TP – Council Property Asset Team)

- 1. RG outlined the EPB process from Council's perspective including
  - the Consent Team reviewed all available documentation and on-balance, placed the
    building on the national EPB Register. They also issued Community Facilities as the
    building owner, with an EPB Notice under Section 133AL of the Building Act 2004 giving
    a period of 15 years from the date of the Notice for strengthening work to be
    completed, such that the building is no longer an EPB, or to demolish the building. The
    date by which this must be completed is 27 July 2035.
- 2. There was discussion held related to the additional / expanded information which the Council Consenting Unit is seeking.
- 3. To assist NH, RG provided a number of documents including
  - a Review of the Opus DEE by CERA (signed-off by three engineers) dated 7.3.14
  - an update of the Opus IEP dated 22.4.14
  - a CERA Continuing Concerns letter dated 8.9.14
  - a Meeting Record involving representatives of YRRA, their consultant advisers (including NH) and Council – dated 9.4.19
  - a photograph of Hall chimney showing earthquake damage undated
  - an example of a recent DSA to illustrate expected coverage of the additional work.
- 4. RG outlined the expectations that the Consenting Unit has for additional/expanded information which includes, but not limited to
  - choice of ductility factor
  - presence of ties and whether they significantly influence the outcome
  - concrete strength
  - comment on earthquake damage, cracking etc especially whether structural/nonstructural
  - detail when NH last visited site
  - treatment of damaged chimney
  - mention that NH has based the analysis on the Opus geotechnical report
  - address the Critical Structural Weaknesses (CSW) identified in the Opus DEE
  - clarification of assumptions made especially showing they are consistent with the 2017 EPB requirements. (Noting that the Opus DEE was prepared without the full set of drawings which were discovered after the Opus DEE was prepared)
  - include a PS2 from a CPEng qualified engineer who completes an appropriate peer review. RG pointed out that given that there are a number of assessments/reports relating to this building, the Consenting Unit would be looking for NH to supply a PS2 from a CPEng engineer, as confirmation of their peer review. NH gave the name of one engineer who he may use.

- 5. TP highlighted that Community Facilities as the building owner is required under the Act to respond to the Notice by displaying the Notice in a prominent location on the building. This is the immediate task which we seek to complete at this time. TP said that as the additional work discussed could take some weeks, TP will be in touch with appropriate YRRA representatives to advise them that the Notice will be posted on the building without further delay.
- 6. If the additional analysis shows that the building is no longer an EPB, then if they are satisfied, the Consent Team can remove the building from the EPB Register and remove the Notice. Clearly if the EPB Notice is lifted as a result, then the Notice will be removed from the building.

Meeting notes prepared by Tim Priddy



43 Peacock Street PO Box 13-117 Christchurch 8141 New Zealand Ph 03 366 1502 www.thconsultants.co.nz email infogthconsultants.co.nz

Ref. 2098-61 6 May 2022

Yaldhurst Community Committee C/o Sean Dixon 207 Durham Street South Christchurch

#### Yaldhurst Memorial Hall

TH Consultants is currently preparing a Detailed Seismic Assessment (DSA) for the Yaldhurst Memorial Hall.

This DSA is an update on the Opus Detailed Engineering Evaluation (DEE) Report of Sept 2012.

The TH Consultants DSA is based on the "Seismic Assessment of Existing Buildings" guidelines document published under the auspices of the Ministry of Business Innovation and Employment (MBIE) in July 2017.

TH Consultants is preparing a proposal to improve the seismic response of the building.

#### **Building Current Status**

It is currently assessed that the building has a seismic rating of 45 to 50 %NBS (Percentage new building standard).

This assessment is currently being reviewed by an independent engineering consultant. No major issues of disagreement have been identified to date. A site visit to review some areas of existing construction is required before confirmation can be provided.

### Strengthening Proposals

The general concept of the strengthening proposals is to provide additional support details to the relative areas assessed as being below 67 %NBS.

- Concrete columns are to have a structural steel tie provided at floor level.
- Concrete masonry infill walls are to have upgraded tie connections.
- Existing chimney structure is to be removed.
- · Additional lateral wall bracing is to be provided.
- Additional roof bracing is to be provided.
- Additional connections to corbel support at top of columns.
- Upgraded connections between rafters and end walls is to be provided.

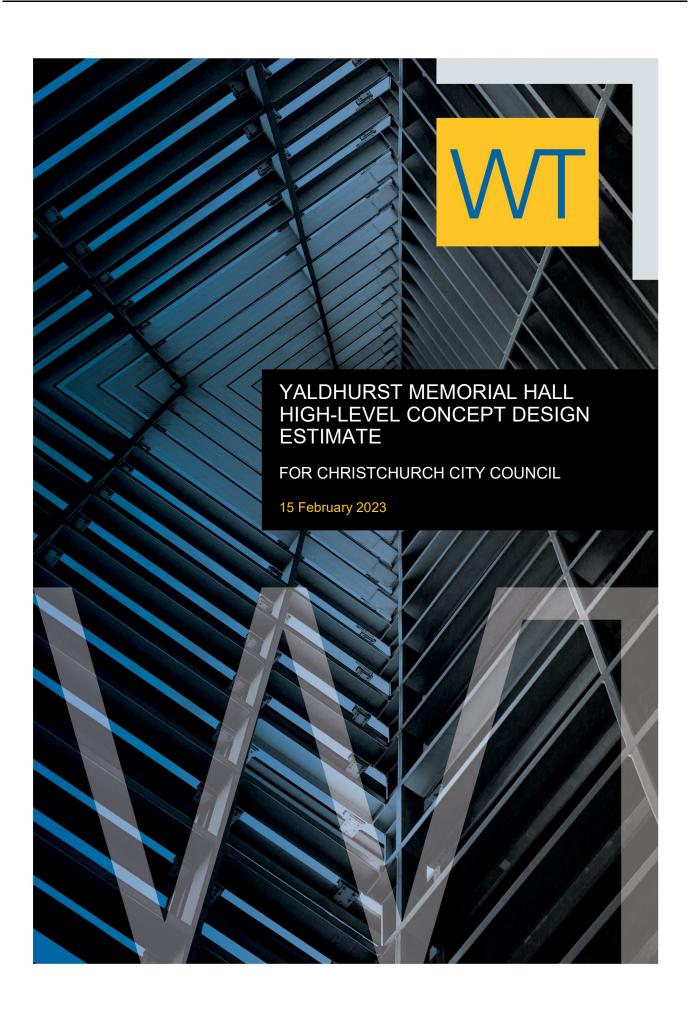
These upgrade works are envisaged as being reasonably simple and economical to carry out with no significant demolition or additional structure required.

**TH Consultants Ltd** 

N R Hanham CPEng, FEngNZ, IntPE(NZ), BE(Hons)

Member of the Association of Consulting Engineers New Zealand

T:\Job files\2098 Dennis Thomson\2098-61 Yaldhurst Hall\5 2098-61 Engineer\2098-61 22-04-06 Current Review.docx





wtpartnership.com

# 1. EXECUTIVE SUMMARY

WT Partnership (WT) has prepared this High-Level Concept Design Estimate for Christchurch City Council (CCC) to provide an indication of the project costs for the structural strengthening (67% NBS) and upgrade of Yaldhurst Memorial Hall located at 524 Pound Road, Christchurch.

The works can be summarised as follows:

The building is divided into a main hall with a stage area, ladies and gents toilets and mezzanine area; a smaller section to the south houses the lounge, kitchen and office, and there are two later additions to the main building making up the north entrance lobby and south storeroom. The building will be strengthened to 67% NBS in accordance with the scheme produced by Finesse Consulting Engineers dated 27/01/23. Allowances for consequential works to the existing building fabric and finishes and upgrades in accordance with the notes and comments received from Maguire & Harford Architects.

The following is a summary of the project costs: -

	CONSTRUCTION COSTS	GFA		RATE/M2	TOTAL
1	BUILDING	411	m2	3,886	1,597,000
2	SITE WORKS & INFRASTRUCTURE	1	Item		168,000
	SUB TOTAL (CONSTRUCTION COSTS)				1,765,000
3	DESIGN & CONSTRUCTION CONTINGENCY	10	%		176,500
4	PROFESSIONAL FEES	15	%		291,225
	TOTAL PROJECT COST				2,232,725

The costs above are inclusive of P&G and Margin

WT has made various assumptions and excluded certain items therefore Section 2 and 3 of this report should be read in conjunction with the above figures. The estimate is based on the information listed in Section 4 of this report All figures exclude GST

Full details of the above along with a breakdown by Element is included in Appendix A

wtpartnership.com

# 2. CLARIFICATIONS

The following should be read in conjunction with the High-Level Concept Design Estimate:

- 2.01 The estimate has been prepared on the basis of the works being competitively tendered to a select list of appropriately sized and experienced contractors to establish a fixed price lump sum contract
- 2.02 Cost estimate priced at current rates as at 1st Quarter 2023 Escalation excluded as currently no programme for the works
- 2.03 P&G has been included at 15%
- 2.04 Contractor's Margin has been included at 10%
- 2.05 Design Contingency and Construction Contingency have been included at 10%
- 2.06 Professional Fees have been included at 15%
- 2.07 All allowances as noted within the body of the estimate

# 3. EXCLUSIONS

The following are excluded from the High-Level Concept Design Estimate:

- 3.01 Goods and Services Tax
- 3.02 Development Contributions
- 3.03 Land cost
- 3.04 Archaeological Discovery Protocols
- 3.05 Decanting
- 3.06 Loss on income, relocation, temporary storage and disruption costs for the period of the works
- 3.07 Escalation currently no programme for the works 8% per annum at present
- 3.08 Loose FF&E
- 3.09 Client Development Management Fees
- 3.10 Resource and Building Consents
- 3.11 Legal fees
- 3.12 Finance and holding costs
- 3.13 Sales, marketing and leasing
- 3.14 Any local or central Government taxes, duties, fees, rates or levies which are, or may become, payable.
- 3.15 Ground works generally
- 3.16 Intumescent paint to structural steel

wtpartnership.com

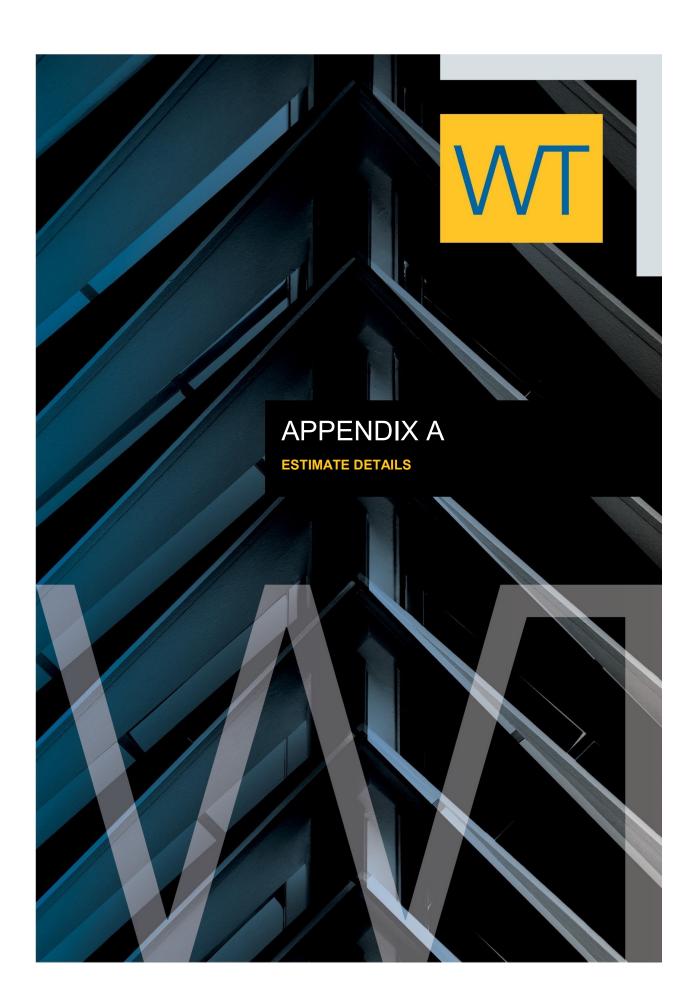
3.17	Roof fall restraint system
3.18	Replacement chimney
3.19	Hardware and equipment associated with IT, data, comms, CCTV, AV and PA services
3.20	Hearing loop installation
3.21	Whiteware generally (hobs, ovens, microwaves, fridges, freezers, dishwashers, etc.)
3.22	Theatre / stage lighting rail and specialist lighting
3.23	Theatre / stage curtains
3.24	Blinds and / or curtains to windows
3.25	Electrical equipment generally (photocopiers, TVs, projectors, kettles, toasters, etc.)
3.26	Fire sprinkler installation
3.27	EV charging stations including infrastructure
3.28	External pole and bollard lighting
3.29	Works to existing services unless otherwise stated (three waters, electric, data and gas as applicable)
3.30	Works outside the boundary of the site
3.31	Future / further investigation and opening up works and associated costs
3 32	Out of hours working

# 4. DOCUMENTS USED

The following documents form the basis of the High-Level Concept Design Estimate: -

- 4.01 Tim Holmes Report and Measured Survey Drawing (undated) received by WT on 09/02/23
- 4.02 Finesse Consulting Engineers 67% NBS Strengthening Scheme drawings dated 27/01/23
- 4.03 Maguire and Harford Architects (Braden Harford) Comments / Notes for Updating Cost Estimate document and Cavity Critter Report Observations document (both undated) received by WT on 09/02/23
- 4.04 Yaldhurst Memorial Hall Detailed Seismic Assessment Report # 1520 dated September 2012
- 4.05 Survey of Condition and Schedule of Recommended Maintenance dated 19/12/14
- 4.06 Site Inspection of Yaldhurst Memorial Hall dated 15/01/15

Item 10



DATE: 15-02-2023



PROJECT SUMMARY							
	CONSTRUCTION COSTS	GFA		RATE/M2	TOTAL		
1	BUILDING	411	m2	3,886	1,597,000		
2	SITE WORKS & INFRASTRUCTURE	1	Item		168,000		
	SUB TOTAL (CONSTRUCTION COSTS)				1,765,000		
3	DESIGN & CONSTRUCTION CONTINGENCY	10	%		176,500		
4	PROFESSIONAL FEES	15	%		291,225		
	TOTAL PROJECT COST				2,232,725		

DATE: 15-02-2023



#### **ELEMENTAL SUMMARY - BUILDING**

ITEM	ELEMENT	RATE / m² of GFA	TOTAL
1.1.	DEMOLITION & ALTERATIONS	525	215,600
1.2.	SUBSTRUCTURE	121	49,700
1.3.	FRAME	251	103,300
1.4.	ROOF	268	110,000
1.5.	EXTERNAL WALLS	179	73,500
1.6.	WINDOWS AND EXTERNAL DOORS	349	143,500
1.7.	PARTITIONS	16	6,600
1.8.	INTERNAL DOORS	54	22,000
1.9.	FLOOR FINISHES	240	98,500
1.10.	WALL FINISHES	322	132,500
1.11.	CEILING FINISHES	145	59,500
1.12.	FITTINGS AND FIXTURES	56	22,900
1.13.	SANITARY PLUMBING	64	26,400
1.14.	HEATING AND VENTILATION SERVICES	156	64,300
1.15.	FIRE SERVICES	33	13,600
1.16.	ELECTRICAL & SPECIAL SERVICES	220	90,400
1.17.	DRAINAGE	24	10,000
1.18.	SCAFFOLDING / MOBILE ACCESS	49	20,000
1.19.	PRELIMINARIES & GENERAL 15%		189,340
1.20.	MARGIN 10%		145,360
	TOTAL CARRIED TO PROJECT SUMMARY	3,886	1,597,000

GFA: 411 m<sup>2</sup>

DATE: 15-02-2023



#### **ELEMENTAL DETAIL - BUILDING**

ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.1.	DEMOLITION & ALTERATIONS				215,600
1.1.1	Allowance to temporarily remove and / or protect existing heritage fixtures and features and reinstate as necessary upon completion of the works	1	sum	2,000	2,000
1.1.2	Allowance to temporarily disconnect existing mains services and reconnect on completion	1	sum	1,000	1,000
1.1.3	Allowance for temporary propping to existing structure and remove on completion	1	sum	2,500	2,500
1.1.4	Allowance to demolish existing fuel store	12	m2	150	1,800
1.1.5	Allowance to demolish existing chimney complete including making good existing floor and roof structure	1	sum	5,000	5,000
1.1.6	Allowance to remove existing roof coverings complete (blended rate)	546	m2	40	21,840
1.1.7	Allowance to remove existing soffits	64	m2	25	1,600
1.1.8	Allowance to remove existing fascias and barge boards	127	m	25	3,175
1.1.9	Allowance to remove existing gutters	86	m	20	1,720
1.1.10	Allowance to remove existing downpipes	32	m	20	640
1.1.11	Allowance to remove existing windows complete and prepare openings to receive new	105	m2	100	10,500
1.1.12	Allowance to remove existing pair of external doors including glazed side screen	2	no	300	600
1.1.13	Allowance to remove existing pair of external doors	2	no	200	400
1.1.14	Allowance to remove existing single external door	2	no	100	200
1.1.15	Allowance to block up existing single door opening in external wall	1	no	1,000	1,000
1.1.16	Allowance to remove existing pair of internal doors and frame	1	no	200	200
1.1.17	Allowance to remove existing internal door and frame complete	13	no	100	1,300
1.1.18	Allowance to remove existing kitchen joinery and dispose off site	1	sum	1,000	1,000
1.1.19	Allowance to remove existing sundry fixtures and fittings and dispose off site	1	sum	1,000	1,000
1.1.20	Allowance to cap off, remove and dispose existing sanitary fitting complete	8	No	100	800
1.1.21	Allowance to remove existing wall linings and prepare for new (blended rate)	662	m2	20	13,240
1.1.22	Allowance to remove existing ceiling linings and prepare to receive new (blended rate)	382	m2	25	9,550
1.1.23	Allowance to remove existing floor coverings and prepare to receive new (blended rate)	191	m2	25	4,775
1.1.24	Allowance to remove existing timber flooring from hall	191	m2	50	9,550
1.1.25	Demolish existing skirtings and dispose off site	191	m	10	1,910

WT 3 of 12

DATE: 15-02-2023



	ELEMENTAL DETAIL - BUILI	DING			
ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.1.26	Allowance to remove existing mechanical and electrical fittings (including lighting) and prepare to receive new (based on GFA)	411	m2	20	8,220
1.1.27	Allowance to carefully cut and remove sections of existing timber floor structure (joists and bearers) to enable installation and connection of new UB portal frame columns including all necessary making good and providing new timber framing as necessary upon completion of the strengthening works	8	no	500	4,000
1.1.28	Allowance to saw cut and remove vertical strip of plastered concrete column internally (for new steel column strengthening), approx. 300mm wide	47	m	50	2,350
1.1.29	URM repair complete including new timber framing fixed to and through existing masonry with Helifix screws at 450 centres each way and one layer stopped GIB Braceline	218	m2	325	70,850
1.1.30	Allowance to extend existing window and door sills, jambs and heads following URM repair	104	m	75	7,800
1.1.31	Placeholder allowance for removal and disposal of hazardous materials including but not limited to asbestos (to be reviewed upon receipt of survey reports)	1	sum	25,000	25,000
1.2.	SUBSTRUCTURE				49,700
	Foundations for structural steel support frame				
1.2.1	Allowance to adapt existing concrete foundations for new steel portal columns	8	No	1,100	8,800
	Timber floor construction				
1.2.2	Allowance for new sub floor framing including cutting out existing borer damaged timbers as necessary (assume 25% of total floor area)	103	m2	250	25,750
	Repairs to existing				
1.2.3	Allowance to grind out and epoxy repair cracks in concrete perimeter footings	1	sum	5,000	5,000
1.2.4	Allowance for crack repairs to existing reinforced concrete slabs in north entrance lobby and south storeroom	1	sum	2,000	2,000
1.2.5	Allowance for crack repairs to existing concrete steps	1	sum	1,000	1,000
1.2.6	Replace grilles to sub floor vents	21	No	100	2,100
1.2.7	Allowance for remedial works to existing piles disconnected	1	sum	5,000	5,000

from the perimeter foundation beam

DATE: 15-02-2023



ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.3.	FRAME				103,300
	Structural steel strengthening				
1.3.1	360UB44 (beam)	2,012	kg	12	24,144
1.3.2	360UB44 (column)	2,101	kg	12	25,212
1.3.3	200PFC	1,260	kg	12	15,120
1.3.4	100SHS5 diagonal strut	384	kg	15	5,760
1.3.5	75SHS5 strut	52	kg	15	780
1.3.6	Allowance for sheet brace straps	34	m	30	1,020
1.3.7	Allowance for stiffeners, bolts and connections (15%)	1	sum		11,000
1.3.8	Chemset fixings between new steel portal and existing concrete frame	40	no	50	2,000
	Other strengthening				
1.3.9	12mm Thick plywood bracing	73	m2	100	7,300
1.3.10	Allowance to double up timber rafter	8	m	40	320
1.3.11	Allowance to enhance existing roof bracing by doubling timber (based on area)	72	m2	50	3,600
	Repairs to existing				
1.3.12	Allowance for crack repairs to existing concrete columns and ring beam	1	sum	5,000	5,000
1.3.13	Allowance for spalling repairs to existing concrete ring beam	1	sum	2,000	2,000
1.4.	ROOF				110,000
1.4.1	Colorsteel or similar metal roofing including flashings	546	m2	110	60,060
1.4.2	Allowance for new thermal insulation (laid flat on existing roof structure)	388	m2	20	7,760
1.4.3	Allowance for new guttering	86	m	100	8,600
1.4.4	Allowance for new downpipes	32	m	100	3,200
1.4.5	Allowance for new fibre cement soffits	64	m2	120	7,680
1.4.6	Allowance for new fascias and barge boards	127	m	100	12,700
1.4.7	Allowance for replacement of roof timbers infested with borer	1	sum	10,000	10,000

DATE: 15-02-2023



ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.5.	EXTERNAL WALLS				73,500
1.5.1	Allowance to repair and redecorate external walls (blended rate)	336	m2	75	25,200
1.5.2	Allowance for proprietary parapet cap flashing	26	m	250	6,500
1.5.3	Allowance for crack repairs to external walls generally	1	sum	25,000	25,000
1.5.4	Allowance for new thermal insulation	336	m2	20	6,720
1.5.5	Allowance for replacement of wall timbers infested with borer	1	sum	10,000	10,000
1.6.	WINDOWS AND EXTERNAL DOORS				143,500
1.6.1	Allowance for new aluminium joinery double glazed windows / louvre complete including flashings, sills and trims	105	m2	1,000	105,000
1.6.2	Allowance for new pair of external doors including glazed side screen including frame, trims, hardware and decoration	2	no	7,500	15,000
1.6.3	Allowance for new pair of external doors including frame, trims, hardware and decoration	2	no	5,000	10,000
1.6.4	Allowance for new single external door and side screen including frame, trims, hardware and decoration	2	no	3,000	6,000
1.6.5	Allowance for window winders to high level hall windows	10	no	750	7,500
1.7.	PARTITIONS				6,600
	Boxing UB columns				
1.7.1	Allowance to box in UB columns with new framing and stopped and painted GIB Braceline	28	m2	200	5,588
	Repairs to existing				
1.7.2	Allowance to make good existing servery opening in kitchen	1	sum	1,000	1,000
1.8.	INTERNAL DOORS				22,000
1.8.1	Allowance for new single timber door including frame, hardware and paint finish	13	no	1,500	19,500
1.8.2	Allowance for double leaf timber door to lobby including frame, hardware and paint finish	1	no	2,500	2,500

DATE: 15-02-2023



ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.9.	FLOOR FINISHES				98,500
1.9.1	Allowance for new sealed timber flooring to main hall	191	m2	250	47,750
1.9.2	Allowance for repairs / patch replacement to existing timber flooring elsewhere (blended rate)	191	m2	150	28,650
1.9.3	Allowance for new flexible floor coverings generally (blended rate)	191	m2	100	19,100
1.9.4	Extra value allowance for entrance carpeting / mat to the main entrance	1	sum	1,000	1,000
1.9.5	Allowance for nosings and transition strips	1	sum	2,000	2,000
1.10.	WALL FINISHES				132,500
1.10.1	Allowance for new stopped and painted GIB on and including timber cavity battens fixed to internal face of existing external walls with trims complete	193	m2	200	38,600
1.10.2	Allowance for new stopped and painted GIB fixed to existing timber framing with trims complete	251	m2	100	25,100
1.10.3	Allowance for new stopped GIB Aqualine fixed to existing timber framing with trims complete in bathrooms	113	m2	90	10,220
1.10.4	Allowance for new sealed Ecoply on and including timber cavity battens fixed to Attic walls in mezzanine space	105	m2	100	10,500
1.10.5	Allowance for wall vinyl in bathrooms	113	m2	150	16,950
1.10.6	Extra value allowance for decorative plywood wall linings (assume 25% of appropriate wall area)	111	m2	280	31,080
1.11.	CEILING FINISHES				59,500
1.11.1	Allowance for stopped and painted GIB Aqualine including timber framing to bathrooms	26	m2	120	3,120
1.11.2	Allowance for stopped and painted GIB including timber framing to store and kitchen	28	m2	110	3,080
1.11.3	Allowance for acoustic suspended ceiling system complete (including seismic restraint)	328	m2	100	32,800
1.11.4	Extra value allowances for acoustic and decorative ceiling finishes (blended rate) (assume 25% of suspended ceiling area)	82	m2	250	20,500

DATE: 15-02-2023



ELEMENTAL DETAIL - BUILDING					
ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.12.	FITTINGS AND FIXTURES				22,900
	Cleaners store				
1.12.1	Allowance for cleaners sink cupboard	1	no	1,500	1,500
	<u>Kitchen</u>				
1.12.2	Allowance for kitchen cabinetry complete with benchtops	1	sum	12,000	12,000
1.12.3	Allowance for roller shutter to servery opening	1	no	2,000	2,000
	<u>Bathrooms</u>				
1.12.4	Allowance for grab rails	3	no	375	1,125
1.12.5	Allowance for hand dryers	2	no	1,500	3,000
1.12.6	Allowance for soap dispensers	2	no	150	300
1.12.7	Allowance for toilet roll holders	3	no	150	450
1.12.8	Allowance for sundry hardware, mirrors etc.	1	sum	1,500	1,500
	Sundry Items				
1.12.9	Allowance for signage	1	sum	1,000	1,000
1.13.	SANITARY PLUMBING				26,400
1.13.1	Kitchen sink with tapware and waste and water pipework	1	no	2,500	2,500
1.13.2	Allowance for wall mounted instant hot water unit (Zip or the like) including water pipework	1	no	2,000	2,000
1.13.3	Accessible wash hand basin with mixer and waste and water pipework	2	no	2,000	4,000
1.13.4	Accessible WC suite with waste and water pipework	3	no	2,000	6,000
1.13.5	Trough urinal including waste and water pipework	1	no	5,000	5,000
1.13.6	Cleaners sink including tapware and waste and water pipework	1	no	3,000	3,000
1.13.7	Allowance for hose tap	2	no	750	1,500
1.13.8	Allowance for BWIC (10%)	1	sum		2,400
1.14.	HEATING AND VENTILATION SERVICES				64,300
1.14.1	Allowance for mechanical extraction to bathrooms and kitchen based on floor area	44	m2	200	8,800
1.14.2	Allowance for heating, cooling and ventilation to communal areas based on floor area	331	m2	150	49,650
1.14.3	Allowance for BWIC (10%)	1	sum		5,800

ITEM	DESCRIPTION	QTY	UNIT	RATE	TOTAL
1.15.	FIRE SERVICES				13,600
1.15.1	Allowance for fire alarm and smoke detection system complete (based on GFA)	411	m2	30	12,330
1.15.2	Allowance for BWIC (10%)	1	sum		1,200
1.16.	ELECTRICAL & SPECIAL SERVICES				90,400
1.16.1	Allowance for new electric, ICT and security installation complete (based on GFA)	411	m2	200	82,200
1.16.2	Allowance for BWIC (10%)	1	sum		8,200
1.17.	DRAINAGE				10,000
1.17.1	Allowance for general drainage adaptations and connections	1	sum	10,000	10,000
1.18.	SCAFFOLDING / MOBILE ACCESS				20,000
1.18.1	Allowance for scaffolding / access at height	1	sum	20,000	20,000

DATE: 15-02-2023



	ELEMENTAL SUMMARY - SITE WORKS & INFRASTRUCTURE				
ITEM	ELEMENT	RATE / m² of GFA	TOTAL		
2.1.	EXTERNAL WORKS		132,750		
2.2.	PRELIMINARIES & GENERAL 15%		19,910		
2.3.	MARGIN 10%		15,340		
	TOTAL CARRIED TO PROJECT SUMMARY		168,000		

GFA: 1 m²

**DATE: 15-02-2023** 



#### **ELEMENTAL DETAIL - SITE WORKS & INFRASTRUCTURE** QTY UNIT ITEM **DESCRIPTION RATE TOTAL** 2.1. **EXTERNAL WORKS** 132,750 Site Works 2.1.1 Allowance for general site clearance 1,150 m2 5 5,750 2.1.2 Allowance to patch repair car park asphalt 914 50 45,700 m2 2.1.3 1 2,000 2,000 Allowance for road markings sum 2.1.4 236 Allowance for soft landscaping including planting m2 50 11,800 2.1.5 135 250 33,750 Allowance for new fencing and gates m2 2.1.6 Allowance to protect existing trees 1 500 500 sum 2.1.7 Allowance for new external timber access ramps with handrails 1 sum 20,000 20,000 to entrances at north and west facades 2.1.8 Allowance for new internal timber access ramp with handrails to 1 sum 5,000 5,000 stage area **Drainage** 2.1.9 Allowance for drainage connections Item 3,000 3,000 1 2.1.10 Allowance for storm water drain run adjacent to the building 35 m 150 5,250 (along west elevation) to prevent water ingress under the building

#### WT PARTNERSHIP IS AN AWARD-WINNING INTERNATIONAL COST CONSULTANCY PRACTICE.

Our expertise covers the building, construction and infrastructure sectors, as well as consultancy services that assist with the acquisition, operation and divestment of assets.

WT draws on the collective experience, knowledge and capability of our professional staff in locations throughout Oceania, Asia, UK & Europe, North America and India/Middle East to provide our clients with the right advice on all aspects of cost, value and risk to assist in achieving optimum commercial outcomes

#### **CHRISTCHURCH**

- T: +64 3 365 7669
- E: christchurch@wtpartnership.co.nz
- A: Ground Floor, 134 Victoria Street Christchurch 8013

#### **AUCKLAND**

- T: +64 9 300 7800
- E: wtp@wtpartnership.co.nz A: Level 4, 18 Shortland Street Auckland 1010

#### WELLINGTON

- T: +64 4 282 0095
- E: wtp@wtpartnership.co.nz A: Level 4, 70 The Terrace
- Wellington 6011

- QUEENSTOWN T: +64 21 521 378
- E: kenny.baird@wtpartnership.co.nz A: Level 2, 36 Shotover Street
- - Queenstown 9300

#### CONNECT WITH OUR GLOBAL NETWORK AT WTPARTNERSHIP.COM

CANADA, CHINA, GERMANY, HONG KONG, INDIA, INDONESIA, ITALY, MACAU, MALAYSIA, NEW ZEALAND, SINGAPORE, SPAIN, SWEDEN, THAILAND, UAE, UNITED KINGDOM, UNITED STATES AND VIETNAM.

#### **Yaldhurst Rural Residents Association**

### Financial Funding for the restoration of Yaldhurst Memorial Hall

#### Introduction

- 1. The Yaldhurst Rural Residents Association (YRRA) reconfirms its interest in obtaining ownership of the Yaldhurst Memorial Hall (the "Hall") following the release of the expression of interest documentation in November 2021.
- 2. YRRA is committed to negotiating in good faith with the Christchurch City Council appropriate terms and conditions for ownership to be transferred.
- 3. This document is prepared in response to a request for further information from Sarah Stuart in her emails dated 14 June 2022 and 22 June 2022. The additional information sought was:
  - a. A funding strategy; and
  - b. Operating and capital budget cashflow for the repair / upgrade phase; and
  - c. Operating budget cashflow for the management phase.
- 4. Background information pertinent to this application has been included so that the details that follow are understood in proper context.
- 5. We trust that this response has provided the necessary information for the EOI process to continue. If the council has any concerns about omissions or further questions, YRRA respectfully requests a further opportunity to address those. We are happy to respond at short notice upon demand. We would be disappointed to be rejected on a technicality at this stage after so much time and resources have been committed to the campaign to save and refurbish the Hall for future generations.

#### **History of the Yaldhurst Memorial Hall**

- In 1946 a committee was established with the purpose of building a Memorial Hall.
- Land was gifted by the Kyle family (a local family still situated in Yaldhurst).
- The community fundraised (600 pounds) and applied for the pound for pound subsidy for the grant for the memorial hall. Fundraising included growing 'a fine crop of potatoes.
- In line with government expectations at the time, the building itself is the memorial, not simply the plaques inside.
- It is understood that a condition of the grant was the hall had to be vested to the local authority to be an appropriate guardian of the building.
- The hall was opened in 1954 by Mr McAlpine (Member of Parliament for Selwyn and Minister of Railways) stating 'I think those who fought would appreciate this memorial –a useful addition to amenities of the district'
- The hall has been used for weddings, dances, birthdays, community events, and was still in use until the 2010 and 2011 earthquake.

#### What has occurred since the earthquakes

- There has been various correspondence between the community representatives and the council on ownership of hall, including an email from the council stating the ownership, and accountability of any demolishment and repair were the local community's.
- There have been many meetings with the community with various accounts of the insurance of the building. In one meeting it was stated the building wasn't insured and then in later meetings it was disclosed that the building was insured but under a collective insurance policy.
- The community had volunteer events to maintain the building and grounds and fundraised to get the minimum materials to work on the building.
- When the guardianship of the hall was established to have been under the council, the keys were taken from the community, and they have no access to the hall.

#### Operating and Capital Budget - Repair and Upgrade

#### Phases of work

- 6. As previously explained, YRRA intends to upgrade and restore the Hall in two phases. Phase One represents work that must be completed before the Hall is operational. Phase Two represents optional upgrades that YRRA intends to complete over time.
- 7. YRRA commissioned a Quantity Surveyor report in December 2021. The assessment is that restoration of the Hall for Phase One will cost approximately \$275,000. This will bring the Hall up to a standard that would make it not only useable (67% NBS, and meeting accessibility and fire requirements) but also desirable to be used and hired. The total cost for Phase Two is currently estimated to be \$282,000.
- 8. The total amounts required are inclusive of all required materials and labour at market rates. The scope of works is detailed below in the Capital budget cashflow (expenditure) for the repair / restoration / upgrade
- 9. Once funding is in place, YRRA expects the Phase One will take approximately 6 months to complete. Phase Two are "nice to haves" and will take place over several years as and when funding is available.

#### **Funding Strategy**

#### Community support

10. The YRRA committee sought feedback from residents, businesses, education, and other community groups to gauge interest and support for the project.

Significant support has been communicated to the committee, including generous offers to donate materials and services. These include but are not limited to:

- o Heritage NZ
- o The Yaldhurst Model School
- o RSA
- o Fulton Hogan Ltd

- o Sol Quarries Ltd
- o Landpower Ltd
- o Johnny Fresh Yaldhurst Greengrocer
- o Ali Cats Cattery
- o Southern Alps Sprouts
- o CP Lime Solutions Ltd
- o Fiveash Contracting Ltd
- o Faulks Construction
- o Arcadia Nursery
- o Resene Paints
- Sockburn Joinery
- o Infinity Investment Group
- o Commercial Flooring Ltd
- o CCL Contracting Ltd

Many users and community groups have formally given their support to the restorations of the hall so they can use for

- Yaldhurst Women's Group weekly meeting.
- Canterbury West Coast Centre of Piping and Dancing Association concerts, competitions, and fundraising.
- Monthly Craft and fibre meetings.
- Family gatherings and celebrations.
- Quilting and craft groups.
- Yoga instruction.
- YRRA Committee meetings and YRRA AGM.
- Yaldhurst Model School for school functions as they do not have access to their own hall.
- 11. The general sentiment from donors is that this is only their preliminary contribution, and that more will come once there is evidence of real progress towards obtaining ownership. Unfortunately, it appears delays have thwarted momentum and increased scepticism.
- 12. The committee is confident that further expressions of support and donations will come once ownership of the Hall is confirmed. This will ultimately mitigate the scale of fundraising required.

#### Charitable trusts

13.We have held very positive initial conversations with charitable trusts about how they will be able to contribute to the restoration and

management of the Hall. It is clear that the objectives of YRRA are entirely consistent with the funding goals of those entities.

14. However, a common theme has emerged that without ownership of the Hall, in most cases YRRA would be ineligible to apply for funding. Only one charity, Lotteries, would consider an application from YRRA while the Hall remains owned by the council. The council would also need to commit to the restoration as part of the submission which is inconsistent with the parameters of the EOI.

#### Council Community boards

15.Yaldhurst comes under the governance of two council community boards. Those boards have also pledged their financial support for both phases but also ongoing support for administration costs. We intend to formally present to those boards after ownership of the Hall is secured.

#### Community support

- 16.To date \$25,000 in donations have been pledged by residents and businesses.
- 17. Existing Funds

There are existing trusts and accounts for the hall, as well as the funds held by YRRA. These include:

- Yaldhurst Hall Crawford Memorial Trust Fund \$11k
- YRRA fundraising to date \$7k
- Alison Syme and Yaldhurst Community account \$3k

It would be our expectation that these funds would be transferred to the hall owners. This equates to circa \$21k.

- 18.To date we have had very generous support from the community offering materials and services, some of the some of the donated services and materials are listed below (providers are not named for privacy and confidentiality purposes):
  - Architectural services full cost
  - Engineering services full cost
  - Landscape Architecture services full cost

- Quantity Surveying Services full cost
- Landscaping full cost
- Paint supply full cost
- Flooring supply full cost
- Building Labour full cost
- Plumbing fittings partial cost
- Kitchen Supply full cost
- Roofing supply full cost
- Cleaning full cost
- Civil works full cost
- 19. The value of the above donated works would reduce the cash requirements as outlined in the full cost budget. Other providers are being spoken to in relation to donating further capital costs.

#### Charitable trusts

20. The following trusts or charities have outlined their support:

- Rata Foundation with consideration in the over \$30,000 bracket. In line with other similar facilities, we would also fit the criteria for ongoing support for operation costs. Other halls receive between the \$10,000-\$20,000.
- Christchurch Heritage Incentive Grant Fund up to 50% of total, but more than likely around the 30% mark
- Lotteries up to 66% of total costs.
- Lion foundation- This is being supported by the Yaldhurst hotel and we are waiting to hear what the funding offer is.
- 21.Discussions are ongoing with NZ Gaming, Lions, Rotary, and the RSA. We also intend to apply to the Strengthening Communities Fund which appears to have purposes consistent with the objects of this project.
- 22.Based on conversations so far, below is an indication of how we believe funding will be made up:

Existing funds	\$	21,000
Current pledged funds	\$	25,000
Current pledged materials	\$	30,000
Charitable funding - Heritage	\$	70,000
<b>Current Funding Cash and Pledges</b>	\$	146,000
Additional Charitable funding	\$	85,000
Additional pledged funds	\$	15,000
Total funds raised	\$	246,000
Short fall to fundraise	-\$	29,000

Further to the above, there are the services that have been pledged, some of these are Painters, Builders, Flooring supply & install, roof supply. These services represent a large chunk of our phase one works and surpass the shortfall.

#### **Budget - Capital and Operating costs for management phase**

- 23.We have connected with other community halls that have a similar proposed use profile (eg Halswell Hall) to estimate income and costings for the Hall at capacity. We have also engaged insurers to ensure these costs are accurate based on the location and state of the Hall.
- 24.However, unlike other halls of similar style and use, we do not need to budget large maintenance amounts, as we are completing significant amounts of this work in Phase One. ie new roof, painting and flooring. This will lessen the need for ongoing for funding for urgent repairs and maintenance.

#### Income

25. The charge rates of the hall would be in line with council charges.

#### Hall rates

• \$17 per hour for not-for-profit community groups where attendees are not charged

- \$30 per hour for not- for-profit community groups where the attendees are charged
- \$90 per hour for commercial business, private or celebration hire <u>Lounge room hire</u>
  - \$15 per hour for not-for-profit community groups where attendees are not charged
  - \$25 per hour for not- for-profit community groups where the attendees are charged
  - \$50 per hour for commercial business, private or celebration hire
- 26.The goal of the caretaker would be to have the hall permanently hired for 4 hours a day for an expected 40 weeks of the year (based on 6 days per week) and on an average charge rate of \$30 per hour. For some groups with barriers to entry and high community need a reduction of fees may be considered.
- 27.YRRA expects to earn \$10,000 a year from one-off events, and a total of \$29,000 of operating income from ongoing rentals.
- 28.Additional revenue opportunities will also be investigated including reinstating the recycling bin leases:

#### **Budget - Capital and Operating costs for management phase**

#### Annual Revenue

Hall hire	\$29,000
Recycling bin	\$3,000
Donations	\$2,000
Fundraising	\$5,000

Total revenue \$39,000

**Annual Expenses** 

Operating costs (at capacity)	*based on similar sized facilities
Hall Maintenance	\$5,000
Insurance (Ando Insurance)	\$2,000
Telephone and internet	\$500
Electricity - lights/heating	\$5,000
Cleaning	\$10,000
Garden maintenance	\$1,000
Accountancy Fees	\$500
Rates	\$1,000 \$1,000 *with a request of subsidy
Administration costs	\$5,000
Website	\$2,000
Stationery	\$1,000
	***************************************
Total expenses	\$33,000
Operating Surplus	\$6,000

# $\underline{\text{Operating budget cashflow (revenue and expenses)}} \ \text{while the repair / restoration / upgrade is} \\ \underline{\text{under way}}$

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Ad-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Total
Cash Inflow																									
Hall hire Recycling bin Donations Fundralsing Fundralsing - Phase 1	50,009	50,000	25,000	30,000	45,000	2,000 85,000	1,000	1,000	1,000	1,600	1,000	1,000	1,000 250 167 417	1,500 250 167 417	2,000 250 167 417	2,500 250 167 417	2,500 250 167 417	2,500 250 167 417	2,509 250 167 417	2,500 250 167 417	2,500 250 167 417	2,500 250 167 417	3,500 250 167 417	3,500 250 167 417	29,000 3,000 10,000 5,000 285,000
Total Inflow	50,000	50,000	25,000	30,000	45,000	87,000	1,000	1,000	1,000	1,000	1,000	1,000	1,833	2,333	2,833	3,333	3,333	3,333	3,333	3,333	3,333	3,333	4,333	4,333	332,000
Cash Outlow																									
Half Maintenance													417	417	417	417	417	417	417	417	417	417	417	417	5,000
insurance (year 1 covered in pag)													167	167	167	167	167	167	167	167	167	167	167	167	2,000
Telephone and internet	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	1.000
Electricity - lights/heating	50	50	200	200	200	200	200	200	417	417	417	417	417	417	417	417	417	417	417	417	417	417	417	417	7,968
Cleaning													833	833	833	833	833	\$33	833	833	833	833	833	833	10,000
Garden maintenance													83	83	83	83	83	83	83	83	83	83	83	8.3	1,000
Accountancy Fees	42	42	42	42	42	42	42 .	42	42	42 .	42	42	42	42	42	42	42	42	42	42	42	42	42	42	1,000
Rates	53	53	83	83	83	83	83	83	83	83	E3	53	83	83	83	83	83	83	83	83	83	83	83	83	2,000
Administration costs													417	417	417	427	417	417	417	417	417	417	417	417	5,000
Website													167	167	167	167	167	167	167	167	167	167	167	167	2,000
Stationery CAPITAL - FHASE 1													83	63	83	83	83	83	83	83	83	83	83	83	1,000
CAPITAL - FHASE 1	5,000	5,000	40,000	60,000	75,000	90,000																			275,000
Total outflow	5,217	5,217	40,367	60,367	75,367	90,367	367	367	584	584	584	584	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	312,968
Net Cash Flow	44,783	44,783	15,367	- 30,367	30,367	3,367	633	633	416	416	416	416	917	417	83	583	583	583	583	583	583	583	1.583	1,583	19.032
Opening Balance		44,783	83,567	74,200	43,833	13,467	10,100	10,733	11,367	12,783	12,199	12,616	13,032	17,115	11,699	11,782	12,365	12,949	13,532	24,115	14,699	15,282	15,865	27,449	
Closing Balance	44,783	89,567	74,200	43,833	13,467	10,100	10,733	11,367	11,783	12,199	12,616	13,032	12,115	11,659	11,782	12,365	12,949	13,532	14,115	14,699	15,282	15,865	17,449	19,032	19,032

#### Capital budget cashflow (expenditure) for the repair / restoration / upgrade

Yaldhurst Hall Estimate Summary		
Phase One		
ASBESTOS & CLEARANCE SURVEY	\$ 5,000	
DEMOLITION **CHIMNEY & LEAN TO**	\$ 12,500	
DEMOLITION **INTERNAL LININGS, FIXTURES, FLOORCOVERINGS*	\$ 14,500	
STRUCTURAL STEEL STRENGTHENING	\$ 22,447	
CARPENTRY RELATED STRENGTHENING	\$ 4,641	
CAVITY BLOCK WALLS **LOW LEVEL** Retrofitting where found to be in poor condition **PROVISIONAL SUM*	\$ 7,500	
CAVITY BLOCK WALLS **UPPER LEVEL** - Timber Framing & Helifix Ties **PROVISIONAL SUM**	\$ 15,000	
CARPENTRY	\$ 1,500	
METAL ROOFING ** CHIMNEY INFILL	\$ 1,800	
SCAFFOLD / EDGE PROTECTION	\$ 15,000	
METAL ROOFING REPLACEMENT	\$ 30,887	
FIRE PROTECTION SERVICES **ALARM SOUNDERS & SMOKE SENSORS ONLY**	\$ 10,000	
SOLID PLASTER **MAKING GOOD TO EXISTING** - PROVISIONAL SUM	\$ 10,000	
PLUMBING - ACCESSIBLE TOILET	\$ 5,000	
CARPENTRY	\$ 19,898	
PAINTING	\$ 24,480	
FLOOR COVERINGS	\$ 24,480	
ELECTRICAL	\$ 5,000	
CONTINGENCY	\$ 23,000	
P&G **ADD 9% of Total**	\$ 22,737	
Phase One Subtotal		\$ 275,370
Phase Two - Nice to Have Items		
JOINERY - KITCHEN / SHELVING / VANITIES	\$ 30,500	
CARPENTRY	\$ 18,040	
RONDO GRID CEILINGS	\$ 5,720	
INSULATION	\$ 10,000	
PLASTERBOARD LINING	\$ 40,600	
ELECTRICAL & DATA SERVICES **COMPLETE RE-WIRE & FITOUT**	\$ 31,000	
MECHANICAL SERVICES	\$ 35,000	
PLUMBING	\$ 15,000	
SECURITY	\$ 4,500	
SITEWORKS & LANDSCAPING	\$ 35,000	
DRAINAGE **MISC WORKS & MAKE GOOD** -PROVISIONAL SUM	\$ 5,000	
INTERNAL DOORS & HARDWARE **REPLACEMENTS**	\$ 4,940	
CONTINGENCY	\$ 23,000	
P&G **ADD 9% of Total**	\$ 23,247	
Phase Two Subtotal	 	\$ 281,547
Grand Total		\$ 556,917

Yaldhurst Rura	Yaldhurst Rural Residents Association Incorporated				
Statement of financial performance for the Year ended 31 March 2022					
	Expenditure				
2021	LANCHULUIC	2022		<u>Income</u>	
82.97	Gifts	<u>2022</u>	<u> 2021</u>		2022
254.52	Gala Day	31.97	1,200.00	Subs/Donations	280.00
600.00	Hearings	0.00	6.31	Interest	5.44
200.00	Hall Hire	0.00			
1,983.75		100.00			
0.00	Legal	0.00	,		
0.00	Audit Donation	200.00			
1.014.00	Profit for Year				
- 1,914.93	Loss for Year	-46.53			
1,206.31	· ·	285.44	1,206.31		285.44
				•	***************************************
2021 12,722.18	Accumulated Funds Balance at 1 April	<b>2022</b> 10,807.25	<i>2021</i> 10807.25	Current A/C	<b>202</b> 2 10,760.72
- 1,914.93	Loss for Year	-46.53			,
10,807.25		10,760.72	10,807.25		10760.72
Treasurer:  Chairperson:  Chai					
herport de/2023					

Yaldhurst Rural Residents Association incorporated					
Statement of Fir 31 March 2023	nancial Performance for t	he Year ended			
2022 31.97 0.00 0.00 100.00 0.00 200.00	Expenditure  Gifts Gala Day Hearings Hall Hire Legal Audit Donation Profit for Year	<u>2023</u> 378.13	<u>2022</u> 280.00 5.44	Subs/Donations Interest	2023 300.00 78.13
-46.53 <b>285.44</b>	Loss for Year	378.13	285.44		378.13
2022 10,807.25 -46.53	Accumulated Funds Balance at 1 April Loss for Year Profit for Year	2023 10,760.72 378.13 11,138.85	2022 10,760.72 10,760.72	Current A/C	11,138.8
Treasurer:  Chairperson:  S. Horred Vulstry  Based on the information provided, in my opinion the financial report provides a true and fair view of the financial position of the Association as at 31 March 2023  My review was completed on 9/06/2023  Signed:  G. D. Musson  G. D. Muss					
					- 5

#### YALDHURST RURAL RESIDENTS ASSOCIATION INCORPORATED

Response title: YALDHURST RURAL RESIDENTS ASSOCIATION INCORPORATED

Receipt number: 2021-December-16-08-54-25262357

Business name: YALDHURST RURAL RESIDENTS ASSOCIATION INCORPORATED

NZBN: 9429043068746

Date submitted: 09:54 AM 17 December 2021 NZDT

Late? No Qualified? Yes Excluded? No

Notes

Contact details

Surname: MacAlpine / Duncan / Telephone number: 021640347

e-mail address: duncanmacalpine1970@gmail.com

Address: 44

444 Old West Coast Road Yaldhurst, Christchurch, 7676, NEW

ZEALAND

Response files

Filename: Appendix 3.pdf

Size (bytes): 12174734

Checksum: 41ff42a4280b89e8b8b2b18b209d764c7d79dc838a58c33279acd229d22811d9

Filename: Appendix 4.pdf

Size (bytes): 4140119

Checksum: e545c8e269bf56de8af4073f36963dac4222e0a01836a5a9b2ae699f84c9c4a7

Filename: Appendix 2.pdf

Size (bytes): 1392277

Checksum: 218e0c0dce32b349f401bb59a591eb3e3504926ed235e980e21cc2d97732e1ab

Port 3

#### Appendix 2 - Response Acknowledgement Form

This completed form should be emailed as a signed (scanned) document to the EOI Information Contact Person. This enables the Council to understand the level of interest in the EOI and the potential market response. Confirmation that a Respondent may participate in the process is not binding, and a Respondent may elect not to submit a Response after initially indicating it may participate in the process. A Respondent will not be precluded from submitting a Response if this form is not completed and emailed to the EOI Information Contact Person by the time and date stated above.

Response for	Yaldhurst Memorial Hall
EOI Number:	25115327

#### Respondent's acknowledgment

We acknowledge receipt of the EOI Documents dated	17th November 2021	2021
The acknowledge receipt of the Eot Documents dated		

Please tight the applicable statement below:

We may participate in this EOI process

OR

☐ We will not participate in this EOI process

Name of Respondent:	Yaldhurst Rural Residents Association Inc
Signed by Contact Person for the Respondent:	DO Mall
Name and title of Contact Person:	Duncan MacAlpine - Secretary
Contact details of the Contact Person	Phone 021 640 347 Email yaldhurstruralresidents@gmail.com
Date:	3/12/2021

# **Attachment D**

#### Appendix 3 - Form of Response

Response for:	Yaldhurst Memorial Hall
EOI Number:	25115327

#### Part A: Respondent's acknowledgment

- We, being the Respondent named below, acknowledge and agree:
  - (a) that we are interested in participating in this EOI process and any subsequent RFP process;
  - (b) that we understand that the Council is not bound to accept the lowest priced, highest scoring or any Response received nor to proceed with an RFP process.
- 2. We understand that no legal or other obligations shall arise between the Respondent and the Council in relation to the conduct or outcome of the EOI process.
- 3. We attach the information required to be submitted with this Response (as set out in the Key Information checklist in Appendix 1), and confirm that all such information is complete and accurate.
- 4. We nominate the following person to communicate on our behalf in relation to the EOI process and our Response:

Name of Respondent:	Yaldhurst Rural Residents Association Inc
Name and position of contact person:	Duncan MacAlpine - Secretary
Contact person's address:	444 Old West Coast Road, Yaldhurst, Christchurch
Contact person's telephone number:	021 640 347
Contact person's email address:	yaldhurstruralresidents@gmail.com
Signed by authorised signatory of the Respondent:	D. Weell
Name and title of authorised signatory:	Duncan MacAlpine - Secretary
Date:	17/12/21

Part B - Profile of Organisation

Respondent organisational profil	e
Full legal name:	Yaldhurst Rural Residents Association Inc (YRRA)
Trading name: (if different)	
Country of residence:	An Incorporated Society registered in New Zealand
GST number: (if overseas tax number please state)	Not GST registered
Legal status of Respondent: (individual/ilimited liability company/trust/if other please specify)	Incorporated Society
Company registration number:	Incorporation Number 1083043 NZBN 9429043068746
Physical address:	C/- Duncan MacAlpine, Secretary, 444 Old West Coast Road, Yaldhurst, Christchurch New Zealand
Postal address; (if different from above)	
Website:	No website
Location of head office:	No physical head office
Type of business: (Briefly describe the type of business your organisation specialises in)	YRRA is a Rural Residents Association supporting the residents in the Yaldhurst Community.
Year established:	The Yaldhurst Rural Residents Association Inc was incorporated on 27/9/2000
History: (Briefly describe the history of organisation including current operations)	The Yaldhurst Rural Residents Association Inc was formed to support and facilitate community needs.
Total number of staff in Christchurch;	Six voluntary committee members, comprising
Total number of staff in NZ:	As per above for staff in Christchurch
Total staff worldwide:	No physical location as such
Number of locations in NZ:	- Filipsissi isoddon do odon

Part C – Key aspects of the Response

#### Key aspects To serve as a community connection hub for a What is your proposed use of the premises? multitude of community needs. The Yaldhurst community is a very committed one. Every year it utilises the generous offer from the council for a community day where we hold a garden party for all those in the neighbourhood, people bring food and donate time to ensure we can connect. We have no indoor facility to do the same, having lost access to this post the 2010/2010 earthquakes. Unlike other communities, we do not chat over the fence or meet at the letter box, our community is remote and isolated, so connection is essential for the welfare of our community. We commit our energy, our money and our time to constantly dealing and fighting with the devastation of our local areas, dangerous traffic movements and pollution due to the quarries. This has been an exhausting effort for the community and has left long term effects on our residents, however it does also demonstrate the passion of the community. We would love to have positive reasons to connect going forward. Therefore the wellbeing aspects are our big driver for the use of the hall and all areas will be considered. Our ongoing use of the premise is to ensure the wellbeing of the community is built and maintained. This will be done by using the hall for the following areas Connect This is an essential place for people to join together for different reasons, support groups, sports groups, community events etc. There are many groups who currently meet as houses or cafes (that can be cost prohibitive) that will use this space Be active Sports groups, yoga, fitness, marital arts, dances are just some of the proposed uses of the hall, as well as use from the local school for activities. earn something The activities held in the Hall will give community members the opportunity to learn new skills, wood craft, gardening, parenting, updates on community, crafts etc Take notice The hall will continue to deliver on the intent of reflection and gratitude for those who have gone before, not only the soldiers but those who worked so hard to establish the hall The hall will also be available to other religious or spiritual groups to use. Give It is proposed a lot of use and restoration of the hall will be volunteer hours, as it was previously and in its establishment. We will also propose to use this

7 mins nork.

Part C - Key aspects of the Response	
	site for fundraisers for the community in general but also for specific needs of groups or families.
Please provide brief details of your plan for your proposed usage and occupation of the premises:	We are planning to repair/restore and strengthen the building, YRRA will then manage and offer to the Community to help ensure the well-being of the community is taken care of.
What is your preferred length of tenure?	Permanent tenure
Please provide brief details on your estimated timeline for repairs to the premises:	<ul> <li>Our QS &amp; Programmer have estimated a timeframe of 4 months to complete structural and necessary cosmetic work to reopen the hall to 67%NBS based on our engineer's updated scope of works.</li> <li>They have allowed a further 3 months to undertake cosmetic upgrades to the inside and outside of the hall.</li> <li>Depending on funding these works may take work concurrently or in a staged manner with the structural upgrade being the priority so that we can open the hall to our community.</li> <li>We will need to allow time to undertake funding for the works and this process has already begun. We are a Community Group have discussed with the Community and other parties (Heritage CHCH for example) and are confident of being able to raise the required funding, once we've been given the option to proceed further.</li> </ul>
When do you expect the lease to commence?	We would expect the lease to commence up completion of restoration.
What are your expectations and ability to pay a rental for the premises?  Who are the key personnel that will be	We would be prepared to pay a rental, but given the Memorial Hall's history, with the land gifted originally by the local Kyle Family, and the community funding the original construction of the Hall, it would seem inequitable for the community to now have to pay a rental for the use of it.  Managed to YRRA Committee, with input from multiple
managing the use of the property?	people in the community.
Would you provide a personal guarantee or security deposit if required?	Not applicable
mazarus mai your proposed use of the property	There will be public liability issues around usage of the Memorial Hall and hiring to the Community. YRRA will need to complete a detailed risk assessment to eliminate (at best) or mitigate (manage) them.

#### Part C - Key aspects of the Response

Please provide any details on your experience	YRRA has an extensive community base and has a group o			
Andrew Benedition and the Health and the Control of	people within its community that have specialist skills and happy to support the required work on this heritage site.			
*Information only – not scored*	Yes			
Would you or your organisation be prepared to				
self-fund repairs to this property in exchange				
for concessions on leasing costs?				

Part D - Response to the Council's requirements

Question	Respondents Response
Past experience: Please provide examples of your past experience to prove relevant experience of the delivery of the proposed use of the property.  Each example should include the following:  Location of the leased premises  The dates the lease ran / is running for  Details on what activities were undertaken	Our community group previously ran this exact premise up until the 2010/2011 earthquakes, so is well versed as to what is required to run the following examples of proposed usage:  • Yaldhurst Rural Residents Association Committee meetings  • Yaldhurst Rural Residents Association AGM's  • Local resident's celebrations  • Church groups  • Indoor bowls  • Community dances  • Community Fund raising – Quiz evenings for example  • Yaldhurst Primary School events
References: For each of the examples above please provide the following information:  Nominated referee (Client / Customer) whom the Council can contact, including their e-mail address and phone number Initial agreement length and if any rights of renewal were included in the agreement (and if these have been taken or not)  Experience managing health, safety, and environmental activity in your business	The Christchurch City Council is well aware of YRRA's history of its use of the Memorial Hall and will provide as required.
Financial position: Please provide a brief description of your current financial status.  If this information is not available, the Council will accept a letter (from a Bank or Chartered Accountant) confirming the status of the Respondent's financial performance and position.	<ul> <li>Bank account held with Westpac. Balance of \$NZ10,758.93 as at 2/12/21. \$7,000 of this balance is "ring fenced" for Yaldhurst Memorial Hall related matters for future expenditure. These funds have originated from community fund raising events to date.</li> <li>YRRA does not have any ongoing material set expenses to run the Association due to the generous time and input from Community Members.</li> <li>YRRA has the ability to apply for funds for its various activities from a multitude of "Grant" sources and has done so many times in the past</li> <li>YRRA will have the ability to make applications for funds for this hall, regarded as a Heritage asset, from the new Targeted Heritage Rate introduced in the latest Christchurch City Council 10-year budget.</li> <li>The Christchurch City Council currently holds a "Trust &amp; Bequest" worth \$11,000, donated by Mr. Crawford, known as the "Yaldhurst Hall Crawford Memorial", to be used for Capital Improvements to the Hall</li> </ul>

#### Part D - Response to the Council's requirements

#### Health and Safety:

Please describe your approach to Health and safety. Please include details of the following;

- Training (past and ongoing) provided to key personnel
- Any improvement, prohibition or infringement notices, fines and/or prosecutions received in the last 5 years.

Any serious harm accidents in the last five years.

- Health & Safety is a critical component in our daily lives
- YRRA is open to any training as required for use of the building.
- Training will be provided to future key personnel.
- As the Memorial Hall has been locked up for the past 10 years, there have been no prohibition, infringement, fines and/or prosecutions received in the last five years.
- There have been no serious hard accidents in the last five years

#### Appendix 4 - Conflict of Interest Declaration

Note: This form must accompany each submitted Response.

Response for:	Repair and Lease – Yaldhurst Memorial Hall
EOI Number:	25115327

#### CONFLICT OF INTEREST DEFINITION:

A conflict of interest is a situation in which a Respondent could gain (or be seen to gain) an unfair advantage through an association with an individual or organisation. Associations include financial, personal, professional, family-related or community-related relationships.

- An actual conflict of interest is where there already is a conflict
- A potential conflict of interest is where the conflict is about to happen or could happen
- A perceived conflict of interest is where other people might reasonably think there is a conflict

#### QUESTIONNAIRE:

Question	Response  (Select one answer for each question. Select 'potentially' if others could perceive that a conflict exists.)
Does any person in the Respondent organisation have a close friend or relative who they are aware is (or could be) involved in any evaluation or decision-making relating to this EOI process?	Yes (No) Potentially (circle one)
Has any person in the Respondent organisation recently offered any special discounts, gifts, trips, hospitality, rewards or favours to any person they are aware is (or could be) involved in any evaluation or decision-making relating to this EOI process? (e.g. free travel, free samples for personal use)	Yes (No y Potentially (circle one)
Is the Respondent aware of any person involved in any evaluation or decision-making relating to this EOI process having a financial interest in the Respondent organisation? (e.g. the person is an employee of, or a shareholder in, the Respondent organisation)	Yes (No) Potentially (circle one)
is the Respondent aware of anything that might give the appearance that any person involved in the evaluation stage or decision-making stage of this EOI process is biased towards or against the Respondent	Yes(/No) Potentially (circle one)

If the Respondent answered "yes" or "potentially" to any of the questions above, please set out the details of the situation below.

We would like the council to be reminded of the history of the Hall, the intent for its use and the role it played in the heart of the Yaldhurst community and would continue to in the future.

#### History of the Memorial Hall

- \*In 1946 a committee was established with the purpose of building a memorial hall
- \*Land was gifted by the Kyle family ( a local family still situated in Yaldhurst)
- \*The community fundraised (600 pounds) and applied for the pound for pound subsidy for the grant for the memorial hall . Fundraising included growing 'a fine crop of potatoes'.
- •In line with government expectations at the time, the building itself is the memorial, not simply the plaques inside.
- <sup>\*</sup>It is understood that a condition of the grant was the hall had to be vested to the local authority to be an appropriate guardian of the building.
- \*The hall was opened in 1954 by Mr McAlpine (Member of Parliament for Selwyn and Minister of Railways) stating 'I think those who fought would appreciate this memorial –a useful addition to amenities of the district'
- \*The hall has been used for weddings, dances, birthdays, community events, and was still in use until the 2010 and 2011 earthquake. This was run by a local resident.

#### The Memorial Intent

- <sup>®</sup> A circular was issued to local authorities (councils) outlining the conditions of the memorials
- \*•"something vitally living, something from the very nature of it's use and enjoyment will ever keep before us and the generations that follow us that freedom of life and personal expression for which our men and women fought and fell....the type of memorial which best embodies this ideal is the community centre where the people can gather for social, educational, cultural and recreational purposes"
- Tt should also be noted that the community centre had to be available to all people in the community and sports facilities were declined as they did not hit the criteria.

6. It will be a condition of the granting of any subsidy that the approved war memorial shall be vested in the local authorities or one of the combined local authorities and that due provision is made to the satisfaction of the Government, for the maintenance and upkeep of the memorial, and for its management and permanent functioning as a community centre.

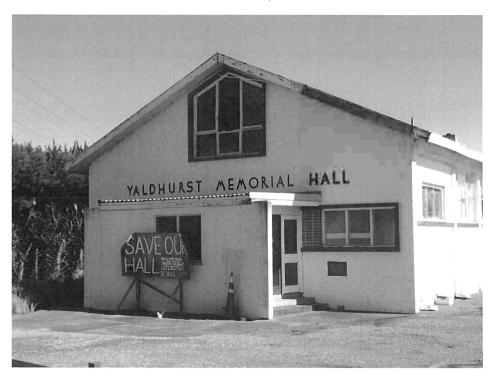
## What has occurred since the earthquakes

- There has been various correspondence between the community representatives and the council on ownership of hall, including an email from the council stating the ownership, and accountability of any demolishment and repair were the local community's.
- •There have been many meetings with the community with various accounts of the insurance of the building. In one meeting it was stated the building wasn't insured and then in later meetings it was disclosed that the building was insured but under a collective insurance policy.
- •The community had volunteer events to work maintain the building and grounds, and fundraised to get the minimum materials to work on the building.
- <sup>e</sup>When the guardianship of the hall was established to have been under the council, the keys were taken from the community and they have no access to the hall.

Declaration	Yes	No
I am authorised to provide this information and sign this form.	TQ.	
The information provided in this form is true and correct.	Ø	
I understand that if the information I have provided is not true and correct, the Council may terminate any future contract (if the Council has reasonably relied on the accuracy of information provided in this questionnaire), at any time and with immediate effect by written notice.	Q.	

Signed by authorised signatory of the Respondent:	U	V):	Maeah	Newson
Name and title of authorised signatory:	Dunc	an	MacAlphe - Secretary	
Date:	17/	12,	51	

# CHRISTCHURCH DISTRICT PLAN – SCHEDULED HERITAGE ITEM HERITAGE ASSESSMENT – STATEMENT OF SIGNIFICANCE HERITAGE ITEM NUMBER 1429 YALDHURST MEMORIAL HALL AND SETTING 524 POUND ROAD, YALDHURST



PHOTOGRAPH: G. WRIGHT 29/01/2019

#### HISTORICAL AND SOCIAL SIGNIFICANCE

Historical and social values that demonstrate or are associated with: a particular person, group, organisation, institution, event, phase or activity; the continuity and/or change of a phase or activity; social, historical, traditional, economic, political or other patterns.

The Yaldhurst Memorial Hall has historical and social significance due to the role it has played in the social life of the local Yaldhurst community, as the local war memorial hall which contains the rolls of honour for those from the area who served in WWI and WWII, and as a product of the government's World War Two 'living memorial' subsidy scheme. It was built as a facility during the mid-twentieth century when community activity characteristically revolved around the local hall and involved a coordinated effort from the Yaldhurst community over an extended period.

In the period after WWII, the government decided New Zealand already had enough symbolic war memorials, and new commemorative efforts would be better channelled into so-called 'living memorials'; community facilities whose use and enjoyment would be an active tribute to the values of the 'Fallen'. A pound for pound subsidy scheme to match community-raised donations was introduced in late 1946 and was immediately popular. Over a period of about a decade and a half, 320 memorial facilities across the country were approved for subsidy. Nominally the definition of facilities was wide, but the government was enthusiastic about the multi-use possibilities of the 'community centre' and encouraged these, largely, to

the exclusion of other proposals. Consequently, of the 320 approved facilities, some 280 were war memorial community centres. The majority of these halls were located in rural communities, which welcomed the opportunity to build (or in some cases rebuild) a modern community gathering place. The average rural subsidy was £3,500. Altogether, the government invested £1.6 million in the scheme.¹ Within the boundary of today's Christchurch District, five community centre projects (Somerfield, North New Brighton, Mt Pleasant, Diamond Harbour, Yaldhurst) and one sports pavilion (Rawhiti Domain), received war memorial subsidies during the 1950s. Two of these (Diamond Harbour and Yaldhurst) were rural facilities; the remainder were urban.

The Yaldhurst Soldiers' Memorial Committee was formed at a meeting on 27 February 1946 with the object of building a war memorial hall. The Yaldhurst proposal remained wholly independent of the scheme until mid-1948 when the committee investigated the possibility of receiving a subsidy.

The subsidy scheme had a number of conditions that had to be met in order for a hall proposal to be eligible. Application had to be received by the Department of Internal Affairs by 16 November 1950, the hall had to be the district's official war memorial, the local authority had to be willing to take ownership of the facility on completion, and funds to be subsidized had to be lodged with the local authority by June 1953. Between 1946 and the date of Yaldhurst's subsidy application in the latter part of 1948, considerable fundraising had already taken place – such that the committee had £1,747 in their account in May 1949. In September 1950 their projected facility was, however, loosely costed at somewhere between £6,600 and £10,000. To gain maximum benefit from the scheme, the Yaldhurst community needed to raise up to £3,000 in little more than four years. Fundraising initiatives by the Yaldhurst Hall Committee over this period included raffles, dances, a gymkhana, potato growing, and an annual ploughing match. The land for the hall was donated by the Kyle family. In total Yaldhurst residents raised some £6,000 towards the cost of their new hall.

In February 1954 a contract was signed with construction firm Hewlett and Croft for £9,636 /10/11; later revised up to £10,056/10/11. As Yaldhurst had raised such a substantial amount, government was not only able to meet half of this cost, but also half the cost of fitting out and furnishing the building as well. This included a war memorial plaque, trestle tables, chairs, a piano, crockery and stage curtains. Many of these items remain in the hall today. In 1955 an additional subsidy was provided for heaters and a block fence.

The Yaldhurst War Memorial Hall was officially opened on Saturday, 4 December 1954 by local MP (and Minister of Railways) J. K. McAlpine before a crowd of 320. The formalities were followed in the evening by a ball attended by 500. The total cost of the completed facility was just under £12,000. This sum does not however account for the considerable amount of voluntary labour contributed during the nine years it took to complete the project. Due to its fundraising efforts, Yaldhurst's £6000 government subsidy was a third greater than that offered to any of the other five successful Christchurch applicants.

During the mid-twentieth century the Yaldhurst Hall provided the venue for meetings of local clubs and societies including the Yaldhurst Women's Division of Federated Farmers (YWDFF) and Young Farmers, a table tennis club and indoor bowls. It also played host to a wide range of social functions including weddings, 21sts and district farewells. The regular Saturday night dance 'down the hall' was the social highlight of the week in many rural communities, and dancing played a big part in the early history of Yaldhurst Hall. Soon after it was completed, a social committee was formed to stage a regular fortnightly dance. This proved very successful initially, but with the advent of rock & roll in the early 1960s, public tastes changed and patronage declined. In 1962 the committee contracted a 'more modern' band, *The Silhouettes* to organise regular dances on their behalf. These dances came to an end in 1968. Occasional dances were also organised by local organisations; in 1958 these included

<sup>&</sup>lt;sup>1</sup> J. Phillips. *To the Memory: New Zealand's War Memorials* Nelson: Potton and Burton, 2016. pp 169-

J. Phillips. 'Memorials and Monuments: memorials to the Centennial and the Second World War' *Te Ara* accessed 5 February 2020 <a href="https://teara.govt.nz/en/memorials-and-monuments">https://teara.govt.nz/en/memorials-and-monuments</a>

the Yaldhurst and Gilberthorpe School Committees, the tennis and swimming clubs, Yaldhurst Federated Farmers and YWDFF. Live music was not always a feature however, and a disc jockey console from this era remains in the hall's store room.

From the late 1960s, factors such as rural depopulation, better transport links and the advent of television led to a decline in traditional modes of communal interaction and a corresponding decrease in local hall use across New Zealand. The end of regular dances in the late 1960s signalled this change for the Yaldhurst Hall, however although the Hall was subject to these social trends, it did remain in fairly consistent use until 2011. The hall therefore remains an evocative time capsule of its post-war heyday. From the 1970s the meetings of the hall committee became more intermittent, and there was apparent difficulty in recruiting community members to put time and effort into hall administration. As a consequence, from the 1990s there were increasing calls for the city council to provide a greater degree of administrative support. The Yaldhurst War Memorial Hall Committee continued however until the hall was closed by the Canterbury Earthquake Sequence of 2010-2011. The hall remains closed today pending decisions on its future. A local residents' group have been campaigning for its retention and reinstatement as a community facility.

#### CULTURAL AND SPIRITUAL SIGNIFICANCE

Cultural and spiritual values that demonstrate or are associated with the distinctive characteristics of a way of life, philosophy, tradition, religion, or other belief, including: the symbolic or commemorative value of the place; significance to Tangata Whenua; and/or associations with an identifiable group and esteemed by this group for its cultural values.

The Yaldhurst Memorial Hall has high cultural and spiritual significance as the district's WWI and WWII memorial, and as a 'community centre' built under a government war memorial scheme that encouraged this particular form of social initiative.

The Yaldhurst Memorial Hall's commemorative purpose is proclaimed by the name in raised letters across the front of the building, by a foundation stone with a memorial dedication, and by two marble 'rolls of honour' flanking the stage – one for each of the world wars. The WWI roll was transferred from the local school; the new WWII roll was designed to match it. When the hall was officially opened by J. K. McAlpine on 4 December 1954, he appealed ... to those whose responsibility it is to maintain this structure and those who make use of it to respect at all times the significance for which it stands. It represents the supreme sacrifice by the few for the many, so that those who follow may enjoy the fruits of that sacrifice in what we hope will be many decades of peace.<sup>2</sup> The hall and its two rolls of honour were then dedicated by Rev. H. G. Norris, former chaplain to the 25th Battalion.

The hall demonstrates a distinctive characteristic of a way of life in mid-twentieth century New Zealand when local halls played an important role in their communities. The importance of the hall to the Yaldhurst community in the mid-twentieth century is evidenced by the extent of community effort that went into fund raising for the hall, and the range of social and community functions it subsequently fulfilled. A campaign to save the hall by the local residents group is evidence that the building is still considered to have significance to this community.

#### ARCHITECTURAL AND AESTHETIC SIGNIFICANCE

Architectural and aesthetic values that demonstrate or are associated with: a particular style, period or designer, design values, form, scale, colour, texture and material of the place.

The Yaldhurst Memorial Hall is architecturally and aesthetically significant as an example of the community centres built under the government's WWII memorial subsidy scheme. It substantially retains its 1950s form and fabric.

One of the conditions of the war memorial subsidy scheme was that hall plans had to be approved in advance by the Internal Affairs Department. Memorial halls came in a wide variety of designs traversing most of the early twentieth century's architectural styles, from

<sup>&</sup>lt;sup>2</sup> Press 6 December 1954

humble vernacular timber or corrugated iron buildings to local variants of Art Deco, Moderne and Modernism. What they did have in common was the basic formula - a hall, a supper room and a kitchen.

The Yaldhurst Hall Committee began their design deliberations in 1949 by inspecting the new RSA halls in Rangiora, Southbridge and Papanui to inform their planning. An initial concept from architect R. A. Heaney was approved by Internal Affairs in 1951. Heaney was later replaced with L. G. Childs in 1952. After a long delay, Child's design was approved by the government in November 1953. Tenders were called immediately. Successful tenderer Hewlett and Croft worked quickly, and the completed Yaldhurst War Memorial Hall was handed over on 31 August 1954.

The new Yaldhurst Hall was a large building for what was then a small, primarily rural community. Designed in a functional modernist style and built in reinforced concrete and concrete block, the exterior is largely utilitarian. A fuel store was added to the rear in 1957 and a new entrance foyer on the frontage in 1959. 3 These later projects do not appear to have received a memorial subsidy. The interior consists of a pinex-lined 18 m main hall with a polished rimu floor, a supper room, a committee room, a large, fitted kitchen with a stainless steel bench and twin hatches (with a raked hood) through which tea would have been dispensed, and a projection booth (although there is no evidence that this was ever fitted out and utilised). 'Gentlemen' and 'Ladies' toilets flank the entry; these are marked with both painted and back-lit glass signs so the facilities could be located when lights were dimmed. The compact varnished ply-lined foyer contains a small ticket office whose multiple compartments suggest that it once also sold cigarettes or sweets. The interior layout and spaces, structure and linings, fixtures, hardware, materials and finishes are notably intact and are evocative of their era. The whole interior is therefore considered to be part of the heritage item. The building was damaged in the Canterbury Earthquake sequence of 2010-2011. Assessed as earthquake-prone, it is currently closed pending decisions on its future.

#### TECHNOLOGICAL AND CRAFTSMANSHIP SIGNIFICANCE

Technological and craftsmanship values that demonstrate or are associated with: the nature and use of materials, finishes and/or technological or constructional methods which were innovative, or of notable quality for the period.

The Yaldhurst Memorial Hall has technological and craftsmanship significance as a well-appointed public hall of the post-war years, built in materials that were of a high quality, and innovative for the time. The level of community and government funding available for the Yaldhurst Hall ensured that the hall was a particularly well-constructed building for its time. The technology and materials employed (a reinforced concrete frame with concrete block panels) support this interpretation. Large scale commercial concrete block production in New Zealand began in Christchurch in the early 1950s, and although reinforced block construction rapidly became popular, the choice of block for the Yaldhurst Hall in 1953 was still relatively novel. <sup>4</sup> None of the other war memorial facilities built under the government's subsidy programme in Christchurch utilized this form of construction. Elements of the interior fit-out also have craftsmanship significance, including the notably large and original fitted kitchen with its hooded serving hatches and stainless steel benches and the polished rimu floor in the main hall.

#### **CONTEXTUAL SIGNIFICANCE**

Contextual values that demonstrate or are associated with: a relationship to the environment (constructed and natural), a landscape, setting, group, precinct or streetscape; a degree of consistency in terms of type, scale, form, materials, texture, colour, style and/or detail; recognised landmarks and landscape which are recognised and contribute to the unique identity of the environment.

<sup>&</sup>lt;sup>3</sup> Yaldhurst Soldiers' Memorial Hall Committee (later Yaldhurst War Memorial Hall Committee) files 1946-2003.

<sup>&</sup>lt;sup>4</sup> N. Isaacs Making the New Zealand House 1792-1982 Phd. thesis, Victoria University 2015, p155.

The Yaldhurst Memorial Hall has contextual significance in relation to its site and setting. The hall is located on a large site at the southeast corner of the busy intersection of Yaldhurst and Pound Roads. It is set back from the corner but surrounded on the west and north sides by open metalled carpark, making it a highly visible landmark. When the hall was opened in 1954, its environs were wholly rural. Despite the volume of traffic now passing, and the proximity of the urban area of the city, the hall still has paddocks and shelter belts on its eastern and southern boundaries, and so retains something of this rural aspect. The scheduled setting consists of the immediate land parcel.

#### ARCHAEOLOGICAL AND SCIENTIFIC SIGNIFICANCE

Archaeological or scientific values that demonstrate or are associated with: the potential to provide information through physical or scientific evidence and understanding about social historical, cultural, spiritual, technological or other values of past events, activities, structures or people.

The Yaldhurst Memorial Hall and setting are of archaeological value because they have the potential to provide archaeological evidence relating to past human activity on the site including that which occurred prior to 1900. Prior to the hall's construction in 1953-54, the site was agricultural land.

#### **ASSESSMENT STATEMENT**

The Yaldhurst Memorial Hall and setting, including the whole interior, are of overall significance to the Christchurch district including Banks Peninsula.

The Yaldhurst Memorial Hall has historical and social significance due to the role it has played in the social life of the local Yaldhurst community and as the local war memorial hall which contains the rolls of honour for those from the area who served in WWI and WWII and as a product of the government's World War Two 'living memorial' subsidy scheme. The hall is of high cultural and spiritual significance as the Yaldhurst community's dedicated war memorial to both world wars It demonstrates a distinctive characteristic of a way of life in midtwentieth century New Zealand when local halls played an important role in their communities as evidenced by the extent of community effort that went into fundraising for and constructing the hall. The hall is of architectural and aesthetic significance as a modernist vernacular hall designed by L.G. Childs. The interior is notably intact and is therefore considered to be part of the heritage item. The Yaldhurst Memorial Hall has technological and craftsmanship significance as a well-appointed public hall of the post-war years, built in materials that were of a high quality, and innovative for the time. The hall has contextual significance in relation to what remains a primarily rural site and setting at the intersection of Pound and Yaldhurst Roads in the peri-urban township of Yaldhurst. The hall and setting are of archaeological significance because they have the potential to provide archaeological evidence relating to past human activity on the site including that which occurred prior to 1900.

#### REFERENCES:

Phillips, Jock. *To the Memory: New Zealand's War Memorials* Nelson: Potton and Burton, 2016.

Phillips, Jock. 'Memorials and Monuments: memorials to the Centennial and the Second World War' *Te Ara* Accessed 5 February 2020 <a href="https://teara.govt.nz/en/memorials-and-monuments">https://teara.govt.nz/en/memorials-and-monuments</a>.

524 Pound Road Property File, Christchurch City Council

524 Pound Road: Yaldhurst War Memorial Hall Unscheduled Heritage File, Heritage Team, Christchurch City Council.

Yaldhurst Soldiers' Memorial Hall Committee (later Yaldhurst War Memorial Hall Committee) files 1946-2003 [held by Yaldhurst Rural Residents' Association].

Isaacs, Nigel. Making the New Zealand House 1792-1982 Phd. thesis, Victoria University 2015. Accessed 20 April 2020 <a href="http://hdl.handle.net/10063/4804">http://hdl.handle.net/10063/4804</a>

The Press

**REPORT DATED: 30/09/2021** 

PLEASE NOTE THIS ASSESSMENT IS BASED ON INFORMATION AVAILABLE AT THE TIME OF WRITING. DUE TO THE ONGOING NATURE OF HERITAGE RESEARCH, FUTURE REASSESSMENT OF THIS HERITAGE ITEM MAY BE NECESSARY TO REFLECT ANY CHANGES IN KNOWLEDGE AND UNDERSTANDING OF ITS HERITAGE SIGNIFICANCE.

PLEASE USE IN CONJUNCTION WITH THE CHRISTCHURCH CITY COUNCIL HERITAGE FILES.

#### **ATTACHMENT F**

Yaldhurst Memorial Hall (524 Pound Road) - Proposed Gift of Hall to YRRA

#### **FACTORS TO CONSIDER WHEN DEALING UNILATERALLY**

- 1.1 The Council must consider and meet the requirements of section 14 of the Local Government Act 2002 (LGA) in particular:
  - (1)(a) Conduct its business in an open, transparent, and democratically accountable manner,
  - (1)(f) Undertake any commercial transactions in accordance with sound business practices.
  - (1)(g) Ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including planning effectively for the future management of its assets.
- 1.2 The relevant Council policies as recorded in the Council's Policy Register are:
  - 1.2.1 Property Leasing Council Property "where the Council recognises there is only one logical lessee for a public property, the Council will unilaterally deal with that lessee." This includes facilities linked to contracts including but not limited to buildings on parks and reserves and not for profit organisations.
  - 1.2.2 Property Disposal of Council Property to publicly tender properties for sale unless there is a clear reason for doing otherwise.
- 1.3 In addition it is useful and supportive to consider the Ministry of Business, Innovation and Employment 'Unsolicited Unique Proposals How to deal with uninvited bids'; guidance for government entities dated May 2013 that recommends when evaluating an unsolicited proposal it needs to be ensured that there is a sound business case to support the decision to accept the unique unsolicited proposal.
- 1.4 The purpose of the MBIE Guidance on Unsolicited Proposals is to provide a methodology for considering unsolicited proposals in a way that:
  - is transparent and fair to everyone;
  - encourages the supplier community to put forward good ideas;
  - promotes objectivity; and
  - supports decisions based on sound fact and evidence.
- 1.5 Based on the above factors, it is considered that with regard to the proposal to gift the Hall there are sound reasons to support dealing unilaterally with YRRA, including:
  - The proposal is consistent with the outcome of the formal EOI tender process.
  - It will provide YRRA with the opportunity to repair and operate the building for community purposes, at no cost to Council.
  - The scheduling of the building as a heritage item will ensure any strengthening / repair work is undertaken in a heritage context.
  - It supports effective and efficient use of resources and the prudent management of the Council's
  - The proposal to gift is subject to completing a special consultative process.

#### Considerations - Accepting the Proposal and the Sale of the Land

- 1.6 There are a number of relevant legal considerations when making a decision about the proposal received and the future use of the property:
- 1.7 Decision Making sections 76 82 LGA

- Section 76 provides that "Every decision made by a local authority must be made in accordance with such of the provisions of sections 77, 78, 80, 81 and 82 as are applicable". In summary those sections provide:
- Section 77 a local authority must, in the course of the decision-making process, seek to identify all
  reasonably practicable options for the achievement of the objective of a decision and in doing so
  assess the options in terms of their advantages and disadvantages.
- Section 78 the views and preferences of persons likely to be affected by, or to have an interest in, the matter must be considered.
- Section 79 provides that in considering how to achieve compliance with sections 77 and 78 they
  must consider the significance of the matter in accordance with its Significance and Engagement
  Policy.
- Section 80 sets out the matters that need to be clearly identified when making a decision that is
  inconsistent i.e. the inconsistency, reason for it and any intention of the local authority to amend
  the policy or plan to accommodate the decision.
- Section 81 provides contributions to decision making by Maori.
- Section 82 sets out the principles of consultation.

Section 78 does not require the Council to undertake a consultation process of itself but the Council must have some way of identifying the views and preferences of interested and affected persons.

- 1.8 There are further considerations under Section 97 LGA which provides that if the Council is proposing to transfer the control of a 'strategic asset' to or from the Council, the Council must not make that decision, unless:
  - The decision is explicitly provided for in its LTP; and
  - The proposal to provide for the decision was included in a consultation documents in accordance with section 93F.
- 1.9 The Significance and Engagement Policy sets out the list of "strategic assets". In particular, the Policy lists as "strategic assets", community facilities as follows:

**Community Facilities** 

(p) cemeteries and listed heritage buildings and structures.

"All" or "its" means the asset as a whole.

- 1.10 In this context the building (the Hall) is categorised as a 'Strategic Asset'. Its proposed disposal is subject to a special consultative process via the LTP 2024-2034 process.
- 1.11 The Council's "Disposal of Council Property" policy adopted 10 December 2015 was developed to ensure that the Council was "consistent with the principles of legislation and the behaviours expected to prudently manage public property".