

Balclutha Information and Services Centre

Seismic Assessment – Initial Evaluation Procedure (IEP)



November 2014 Prepared by: Opus International Consultants Limited For the Clutha District Council

Balclutha Information and Services Centre

Prepared By

Reviewed By

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1 General

1.1 Introduction

Opus International has completed an initial evaluation of the seismic risk of the building based on a physical internal and external walk around on 30th September 2014 and available information.

1.2 Summary of Building Information

Building Name	Balclutha Information and Service Centre
Address	4 Clyde Street
Information available	Original Architectural drawings
Year of Design (approx.)	1954
Storeys	1
Dimensions (approx.)	20m x 10m
Construction Type	Single-storey unreinforced concrete block building. Lightweight corrugated iron roof cladding, timber framed roof and a concrete perimeter ring foundation with piles. Internal walls are concrete block with concrete strip foundations directly underneath. One half of the building is the Balclutha Plunket rooms. The council chambers and lobby of the Town Hall are connected and of the same construction.
Importance Level	IL2

Table 1: Building Information

2 Seismic Assessment Results

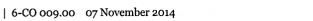
2.1 IEP Calculation Results

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The building has been assessed in two principal orthogonal directions: longitudinal and transverse. The percentage of the New Building Standard (%NBS) has been summarised in Table 2 below, including the Grade as defined by the New Zealand Society for Earthquake Engineering (NZSEE) building grading scheme.

%NBS	%NBS	%NBS	Grade (A-
Longitudinal	Transverse	Overall	E)
30% Masonry (concrete block)	30% Masonry (concrete block)	30%	D

Table 2: Schedule of assessment results





The current overall %NBS estimate is 30% NBS)

3 Conclusions and Recommendations

From this IEP assessment the Balclutha Information and Services Centre has been found to be potentially earthquake prone with 30%NBS. This result occurred because of the age and assumed construction of the building.

It is recommended that a DSA (Detailed Seismic Assessment) is carried out on the building to more accurately determine the %NBS and a strengthening design can then be carried out. Intrusive investigations may need to be undertaken.

The soil class has been assumed to be D from a desktop study but with some geotechnical investigations the actual site soil properties may provide a higher %NBS.

4 Limitations

This report is based on a physical internal and external walk around and available information. The inspection has been non-intrusive and by observation of readily visible elements of the structure only. Neither calculations nor other analyses have been performed beyond that of the initial evaluation procedure (IEP). Our observations have been restricted to structural aspects only. Opus has not carried out any ground investigation for the purpose of the IEP.

Opus' professional services are performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at this time. This report is prepared for the building owner to assist with assessing the relative risk posed by the building in a design earthquake event. It is not intended for any other party or purpose.

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Balclutha Information and Service Centre Part of Report No:1720

Appendix

Assessment Calculations (IEP)



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Printed 26/11/2014

Initial Evaluation Proced	ure (IEP) Asse	ssment - Comp	leted for Clutha Dis	strict Council	Page 3
Street Number & Name: AKA:	4 Clyde Street			Job No.:	6-CO009.00
Name of building:	***************************************	mation and Servi	ce Centre	By: Date:	David Wood 7/11/2014
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Z 1992 Z 2004 -		(NZS4203:1992 Zone Fa (from NZS1170.5:2004,	ctor from accompanying Figure 3.5(Table 3.3)	b))	
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			S _p = 0.85		0.85
b) Structural Performance Scalin Note Factor B values for 1992 to 2004 t	-	= 1/S _p 7 to account for Sp in this p	Factor I: 1.18		1.18
.7 Baseline %NBS for Building, (equals (%NBS) _{nom} x E x F x G			33%		33%
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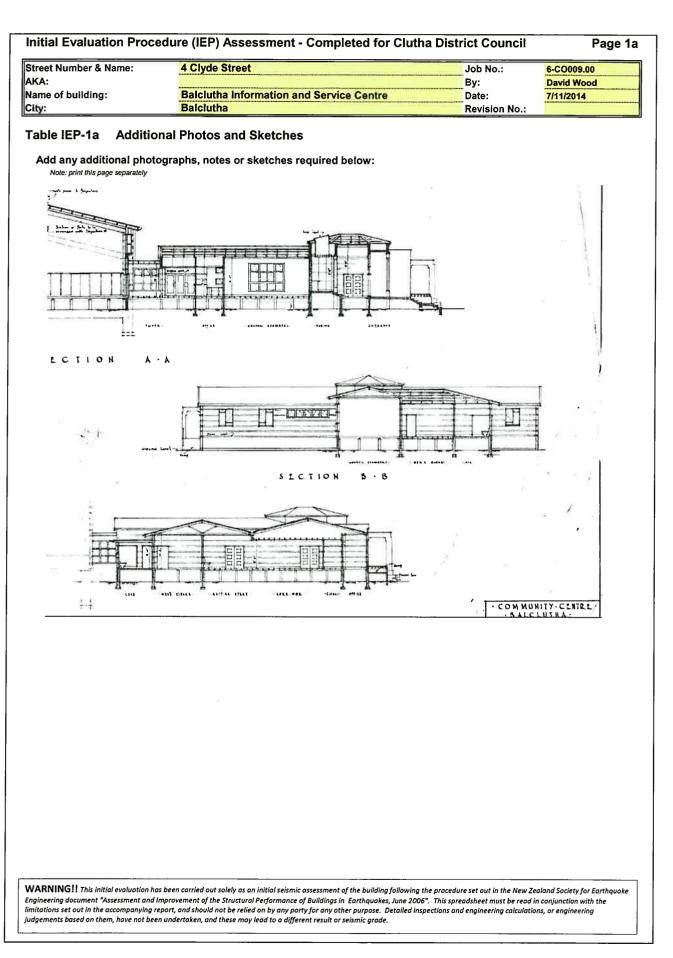
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fer Appendix B - Section B3.2) Transverse Direction				
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