

# Marlborough District Council

## Requirements for Reporting the Structural Design Features for Strengthening Earthquake Prone Buildings.

**Objective, Policies and Procedures for documenting and providing Professional Opinions**

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**Document Control**

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Contents

- Requirements for Reporting the Structural Design Features .....4**
- for Strengthening an Earthquake Prone Building .....4**
- OBJECTIVE.....4**
- POLICY .....4**
  - Policy 1 – Reliance on Reports .....4
  - Policy 2 - Responsibilities for Analysis and Design.....4
  - Policy 3- Construction .....4
  - Policy 4 - Report Format.....4
- METHODS FOR POLICY IMPLEMENTATION .....5**
  - Method 1 .....5
  - Method 2 .....5
  - Method 3 .....5
  - Method 4 .....5
- MODEL DOCUMENTS.....6**
  - OPINION .....6
  - REPORTS .....6
  - FORM 1 (Format for an Opinion on Structural Design) .....7
    - Opinion as to Structural Design. ....7
  - INTERPRETATION.....8

**Requirements for Reporting the Structural Design Features  
for Strengthening an Earthquake Prone Building**

**OBJECTIVE**

**The Objective is to give effect to Council's Objective and Policies for the Strengthening of Earthquake Prone Buildings by ensuring the application of sound engineering principles and to leave a clear record of the Designers intentions.**

**POLICY**

**Policy 1 – Reliance on Reports**

Council will rely on the Reports provided to it as part of the considerations in making decisions in respect of earthquake prone buildings.

**Policy 2 - Responsibilities for Analysis and Design**

Structural analysis and design is to be the direct responsibility of the person or organisation recognised by Council. That person or organisation will direct the extent and degree of analysis and design of proposals presented to Council for consents.

**Policy 3- Construction**

Construction monitoring shall be the direct responsibility of the person or organisation that carried out the analysis and design. Providing that delegation of this obligation is acceptable if the intended delegate is appropriately briefed and is deemed by the Provider of the Opinion to have the appropriate skills.

**Policy 4 - Report Format**

Reporting format shall follow the model set out elsewhere in this document unless special circumstances require otherwise. An explanation to that effect shall be appended to any alternative documentation presented. It will be Council's prerogative as to whether the alternative format will be acceptable or not.

## METHODS FOR POLICY IMPLEMENTATION

### Method 1

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That awareness of the policy that investigations will be relied upon by the Marlborough District Council is through the use of the form of statement of professional opinion included in the model document set out below.

### Method 2

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Conduct site investigations and carry out analytical methods and design processes using procedures and practices appropriate to the scale and nature of the intended works. A means of Compliance for the analysis and design are –

- Earthquake Risk Buildings, 1985 published by the New Zealand Society for Earthquake Engineering, or-
- The Assessment and Improvement of the Structural Performance of Earthquake Risk Buildings, 1996 published by the New Zealand Society for Earthquake Engineering (NZSEE).
- Any successor document produced by NZSEE or any standard adopted by the Building Industry Authority as a means of compliance.

### Method 3

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Documentation shall follow the report format and the model form of Opinion set out below unless otherwise approved.

### Method 4

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Works shall be certified by the engineer providing the Opinion, on completion of those works, as being in accordance with the design including any authorised variations during the course of construction.

**MODEL DOCUMENTS**

**OPINION**

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***Purpose of complying with the format***

The purpose of using this format is to ensure the **Provider** understands there is an explicit reliance on the **Opinion** to enable Council to discharge its statutory functions. Further, the **Provider** is confirming that the necessary skills have been exercised with due regard for the technical complexity of the matter under consideration.

Each Opinion ***shall be specifically drafted*** upon due consideration of the conclusions of the **Structural Report**.

Form 1 details the format of the Opinion.

**REPORTS**

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***Structural Report***

Documentation shall follow the format set out below-

- A Synopsis**
  - 1 Scope of the investigation
  - 2 Summary and Conclusions
  - 3 Recommendations
  
- B Report**
  - 4 Introduction
  - 5 Description of the Structure
  - 6 Foundation Investigations
  - 7 Structural Fabric Assessment
  - 8 Description of Structural Model
  - 9 Assumptions for Analysis
  - 10 Estimated structural capacity relative to the current code
  - 11 References
  
- C Maps and Plans**
  - 12 Schematic Drawings including location plan

Maps and plans are to be prepared to the best practices for presentation using the more common scales. They shall be preferentially in A4 or A3 size for ease of filing and copying.

**At all times it must be borne in mind that the purpose of the documentation is to provide information for future decision making.**

**FORM 1 (Format for an Opinion on Structural Design)**

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**Opinion as to Structural Design.**

**Description of Work :**

.....  
**I ( full name)**  
.....

**Hereby confirm that:**

I am experienced in the field of **structural engineering** and more particularly in the **analysis and design of earthquake prone buildings** and am formally recognised by the Marlborough District Council. I am familiar with and understand the purpose of the Marlborough District Council's reporting standards. This professional opinion is furnished to the Marlborough District Council. **(State purpose of report).**

NB: Where this opinion is also based on reliance on previous plans and reports by others then these should be referred to.

A structural design report, formatted as required, is attached.

**AND**

Investigations have been carried out under my direction and are described in structural design report(s) dated [**provide dates**] The following professional opinion is based on the assumption that the analysis and design is in accordance with current standards and acceptable professional practice.

In my professional opinion and having regard to the specifics of the site and the state of the structure which I have investigated to the extent that acceptable engineering practices require, the plans and specifications are in accordance with acceptable engineering principles and practices and that a construction in accordance with such plans and specifications will meet proper engineering standards.

NB: Special requirements to be set out here for the design and/or supervision of the works including matters that Council should be aware of for the administration of its statutory obligations and its Bylaws. Where this opinion relies on previous plans and reports by others then these are to be referred to.

**(describe proposal)**, then, providing that the recommendations in our accompanying report **(give description of report and plans)** [**insert the nature of controls to be complied with**] [**Complete Opinion**].

***THE ABOVE IS THE EXPECTED FORMAT. EACH REPORT AND OPINION IS TO BE A PURPOSE WRITTEN DOCUMENT. Note that if the format is not to be followed there shall be an explanation of the need for an alternative. Further, it should be noted that an alternative format might not be acceptable. A provider should ensure that the Client is aware of possible conflict.***

## INTERPRETATION

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Absolute safety	Occurs where the probability of a <b>Hazard</b> occurring is zero. (See <b>Safety</b> )
Certificate	A specific document irrespective of form that attests to the <b>Certifier's</b> best endeavours to fairly state a situation and upon which Council may rely
Certification	See <b>Certificate</b>
Certified	See <b>Certificate</b>
Certifier	A person or Organisation accredited for the purpose of supplying <b>Certification</b> to Council
Field Report	A report following the prescribed format setting out investigations and the results thereof pertinent to the production of a <b>Certificate</b> .
Hazard	Potential cause of human, social, environmental or economic harm. (Compare <b>Risk</b> )
Officer's Report	A report prepared by a Council staff member identifying relevant issues and conclusions drawn there from, in the context of the empowering legislation and Council's policies.
Opinion	An approved form of certification used in matters relating to the structural design of works.
Producer	Provider of a <b>Producer Statement</b> for the purposes of the Building Act 1991
Producer Statement	Refer to the Building Act 1991, "Interpretation"
Provider	A person or organisation approved by Council for the purpose of issuing <b>Certificates</b> , <b>Opinions</b> or <b>Producer Statements</b> .
Registered Engineer	A tertiary trained person who is registered in terms of the Engineers Registration Act 1924 or its successor.
Risk	The presence of a Hazard and the Probability of it occurring. (Compare <b>Hazard</b> )
Safety	The state where a <b>Hazard</b> is known and considered tolerable. (See <b>Absolute Safety</b> )
Soils Engineering	A systematic evaluation of the geophysical factors prevailing at a site and the interpretation of those factors.
Standing Orders	New Zealand Standard 9202:1989 Model Standing Orders
Structural Report	A report prepared to record the Designers Objectives, Methods and Assumptions when carrying out the analysis and design of an earthquake strengthening proposal.