

WHE-PAGER PROJECT: BUILDING CONSTRUCTION VULNERABILITY AND INVENTORY

This form is divided into 3 parts:

- Part I: Contributors' Information**
- Part II: Summary of Construction Types, Vulnerability and Population**
- Part III: Colleagues Consulted, Additional Sources of Information Used**

PART I: Contributors' Information

1. Country or Region (if you are only responding for part of a country, please indicate which geographic region.
 Note: the WHE strongly prefers national estimates, unless you have data that clearly apply to only one region):

New Zealand

2. Name(s) of Contributors

Dr Jim (W.J.) Cousins

3. Affiliation (Organization)

GNS Science

4. Mailing address (include city and country)

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5. E-mail

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6. Your self-rating of expertise or confidence: On a scale of 1=low and 5=high, please estimate your level of expertise:

4

Part II: Summary of Construction Types, Vulnerability and Population

Construction Material (choose from drop-down list)	Construction Subtype (Choose from drop-down list--refer to instructions to see complete list)	Probability of collapse (%) of building type when subjected to the specified shaking intensity				Fraction of population who LIVES in this building type		Fraction of population who WORKS in this building type		Peak average # of occupants per building
		IX (-0.65-1.24g)	VIII (-0.34-0.65g)	VII (-0.18-0.34g)	VI (-0.092-.18g)	urban	rural	urban	rural	
1 Masonry	Unreinforced brick masonry in cement mortar with reinforced concrete floor/roof slabs									
2 Masonry	Reinforced concrete block masonry in cement mortar									
3 Structural concrete	Concrete moment resisting frames designed for gravity loads only									
4 Structural concrete	Concrete moment resisting frames designed with seismic features									
5 Structural concrete	Concrete moment resisting frame with concrete shear walls--dual system									
6 Structural concrete	Concrete shear walls cast in-situ									
7 Steel	Steel moment resisting frame with lightweight partitions									
8 Steel	Steel braced frame concentric									
9 Wood	Load-bearing timber stud wall frame with plywood/gypsum board sheathing									
10 Wood										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

For other combinations, use blank fields below:

Buildings having perimeter walls made of large single-height reinforced concrete panels that are tilted up into wall position. The wall units are then anchored to the foundation and are interconnected. The floor is reinforced concrete, and the roof system may be steel or timber truss, or steel portal frame. Roof cladding is usually corrugated iron. If the building has a large foot print, there may be intermediate columns between the walls to support interior gravity loads. Gravity loads are resisted by the tilt-up walls and any intermediate columns. Lateral earthquake loads are resisted by the shear-wall action of the tilt-up walls, and portal frames if present. Tilt-up buildings are typically one story. Tilt-up buildings are most commonly used for industrial and commercial occupancies.

21 Wood

22	All Classes	Total Indoors Populations (millions)	n/a	n/a	n/a	n/a	2.325	1.861	1.913	1.470	
23											
24											
25											
26											
27											

Part III: Colleagues Consulted, Additional Sources of Information Used

1 Name

Affiliation

Mailing address

e-mail

2 Name

Affiliation

Mailing address

e-mail

3 Name

Affiliation

Mailing address

e-mail

4 Sources of information you used (websites, publications, etc.) Please provide as much detail as possible.

Country-wide property valuation database
 National Census records
 Personal knowledge

5 Additional comments