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):

Ireland

2. Name(s) of Contributors

Robin Spence

3. Affiliation (Organization)

Department of Architecture, Cambridge University

4. Mailing address (include city and country)

6, Chaucer Road, Cambridge CB2 2EB

5. E-mail

rspence@carltd.com

6. Your self-rating of expertise or confidence: On a scale of 1=low and 5=high, please estimate your level of expertise: 2

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 mud mortar	15%	4%	0.6%	0	25%	30%	50%	50%	2-6 per dwellilng
2	Masonry	Unreinforced brick masonry in cement mortar with reinforced concrete floor/roof slabs	6%	1%	0.1%	0	74%	70%	20%	30%	2-6 per dwellilng
3	Structural concrete	Concrete moment resisting frames designed for gravity loads only	11%	2%	0.2%	0	1%		20%	15%	50-200 per bldg
4	Steel	Steel moment resisting frame with brick masonry partitions	1.5%	0.2%	0	0			10%	5%	50-200 per bldg
5		Steel braced frame concentric									
6											
7											
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For other combinations, use blank fields below:

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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.

Irish Government Building Stock data, 1998, updated, residential and non-residential

Adaptation of UK non-residential building stock data

Vulnerabilities from Coburn and Spence, Earthquake Protection, 2002

5 Additional comments

UK and Irish building types do not fit within the typology proposed. Pre 1940 brickwork generally used lime mortar, mud is rare; and floors even in recent construction are of timber not rc. RC frame buildings are non-seismic, but lateral resistance is provided for strong wind load at 2-5% of gravity load, sufficient to resist all but very rare earthquakes