





United Kingdom: Summary of Building Types, Vulnerability to Collapse and Occupancy

Completed by: Robin Spence, Department of Architecture, Cambridge University, rspence@carltd.com

WHE Construction Type or Material <i>refer to Table 2 for suggested category(es)</i>	Description of construction type (type of load- bearing structure) <i>(refer to Tables 2 and 3 for suggested categories and sources of data to help answer this question)</i>	Estimate of probability of collapse (%) of the building type when subjected to the specified shaking intensity (expressed as a range) <i>(refer to instructions page 5)</i> (3) MMI / EMS / MSK				Fraction of population who LIVES in this building type <i>(refer to instructions for help in estimating)</i>		Fraction of WORKING population who WORKS in this building type <i>(refer to instructions on page 5 for help in estimating)</i>		Peak average number of occupants per building <i>(refer to instructions on page 5 for help in estimating)</i>
		IX (~0.65-1.24g)	VIII (~0.34-0.65g)	VII (~0.18-0.34g)	VI (~0.092-0.18g)	urban areas (4)	rural areas (5)	urban areas (6)	rural areas (7)	(8)
		(1)	(2)							
7**	Brick masonry, weak (lime) mortar	15%	4%	0.6%	0	35%	50%	48%	50%	1-6 per dwell 
9**	Brick masonry, cement mortar, but with timber floors	6%	1%	0.1%	0	63%	50%	20%	35%	1-6 per dwell 
14**	RC frame, non-seismic (but designed for wind loads)	11%	2%	0.2%	0	2%		21%	10%	50-200 per 
23,26	Steel frame, various types	1.5%	0.2%	0	0	0		12%	5%	50-200 per 

+ =dwelling

Refer to Part 3 (next 3 pages) for tables and links that may help you fill out this form.

If you do not know some of the answers please indicate so with a dash ----- or ?. Use 0 only when you know the number or percent IS 0.

Notes:

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