

GEM Building Taxonomy Report

3 storied Rammed Earth Building in Bhutan

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Taxonomy string:

DX /EU+ETR /LWAL /DY /EU+ETR /LWAL / /HEX:3+HBEX:0+HFAPP:3 /RES+RES1 / /PLFRO / /EWE /+RMT6+RME /FW+FWCN /FOSN

Material type (DX):
Earth, unreinforced

Material technology (DX):
Rammed earth

Material type (DY):
Earth, unreinforced

Material technology (DY):
Rammed earth

Type of lateral load-resisting system (DX):
Wall

Type of lateral load-resisting system (DY):
Wall

Number of storeys above ground:
Exact number of storeys: 3

Number of storeys below ground:
Exact number of storeys: 0

Height of grade above ground level:
Approximate height above grade: 3

Building occupancy class - general:
Residential

Building occupancy class - detail:
Single dwelling

Shape of the Building Plan:
Rectangular, with an opening

Material of exterior walls:
Earth

Roof covering:
Metal sheets

Roof system material:
Metal

Floor system material:
Wood

Floor connections:
Floor-wall diaphragm connection not provided

Foundation system:
Shallow foundation, with no lateral capacity

Countries:
Bhutan

Region (province, state, etc.):
Thimphu

Summary:

Rammed earth buildings are very common in the western part of the country, often varying from 2 to 3 stories, the floor and roof systems are just resting on the walls with no diaphragm action. During the recent earthquake, the most common failure type was the corner cracks.